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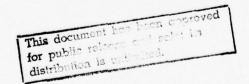


SYSTEMS DYNAMICS MODELING APPROACH TO ANALYSIS OF THE USAF PILOT PRODUCTION/ALLOCATION SYSTEM

THESIS

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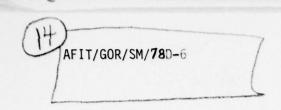
Peter L. Fekke Major USAF



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SYSTEMS DYNAMICS MODELING APPROACH
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PRODUCTION/ALLOCATION SYSTEM.

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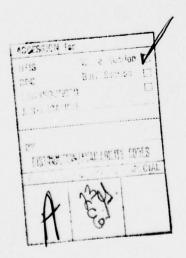
## Preface

The analysis presented in this report represents a preliminary attempt in applying the system dynamics methodology to the United States Air Force pilot resource. System dynamics is a powerful technique for investigating complex systems. My efforts will have been worthwhile if a better understanding of the system is provided; additionally, I hope the model will provide useful information to managers about the impacts of decisions on policy within the system.

In an effort to provide a useful document as opposed to an academic exercise, I have attempted to write this report in plain English to the maximum possible extent. However, the modeling techniques and computer software essential to the discussion are included.

I wish to express my gratitude to Dr. Jon Knight for suggesting this study and providing his aid and assistance. My thanks to Dr. Charles McNichols for reviewing this report and offering his constructive criticism.

Finally, and most importantly, I would like to thank my wife, Neva. Without her encouragement and support, this thesis would not have been completed.



Peter L. Fekke

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#### Abstract

This research was conducted to investigate the United States Air Force pilot production and allocation system. It applies system dynamics methodology as an effective means to analyze this complex system. The Pilot Production/Allocation Management Model (PP/AMM) is developed using DYNAMICS III simulation language. The model is an aggregated representation of the system which deals with recruitment, allocation, and training of pilots. It divides pilot resources into three core forces, rated supplement resources, and Undergraduate Pilot Training instructor pilots.

Initially, the system is analyzed by a discussion of a cost module and of system equilibrium. Next, various force build-up, draw-down, and attrition scenarios are analyzed. A change of management policy involving the forecasting of attrition rates concludes the analysis and demonstrates an application of the model. This example also shows how rapidly and economically information can be obtained from the model.

## I. Introduction

The subject of this thesis is the management of pilots within the United States Air Force (USAF). The pilot force attracts management interest because it is a relatively small portion of the entire Air Force (AF) personnel system that generates a relatively high proportion of the costs associated with that system. Management interest in controlling costs and force quality comes from Pareto's law which states "The significant elements in a specified group usually constitute a relatively small portion of the total items in the group" (Ref 1:132). The rule suggests emphasis on the pilot force.

In his Air War College paper, Colonel J. B. Davis states "The distribution and training of the rated resource has often times followed loosely described and imprecise methodologies, especially when subjected to the intense pressures of change, i.e., the Vietnam buildup and draw down" (Ref 2:1). Pilot training is costly, and the need for training increases as force attrition accelerates. Thus, the current significant increase in pilot attrition is drawing high-level management interest.

# Purpose

The purpose of this research is to develop a systems dynamics model of the pilot force and evaluate its usefulness in the formation of management policy. The pilot force is a complex system that must cope within a wide range of dynamic variables which are not particularly susceptible to accurate forecasting. Its complexity and internal interactions, along with the unpredictable nature of its background conditions, make it important that policies are consistently formulated to be resilient

against varying inputs. One approach to policy design that lends itself to this type of problem is the methodology of systems dynamics developed by J. W. Forrester. The Pilot Production/Allocation Management Model (PP/AMM) is a systems dynamics model written in DYNAMO III; it was developed and applied in order to provide information about the behavior of pilot force structure when stressed by such things as variable attrition, force draw-downs or build-ups, and various training policies. The information can aid in the evaluation of current and contemplated force management policies and suggest the most productive areas for management attention.

The model is an aggregated representation of the Air Force pilot force. It does not attempt to track or forecast the movement of individual pilots. It is not intended to provide exact estimates of costs. The model's purpose is to simulate the behavior of the pilot force structure under specific environmental and policy assumptions. In addition, its purpose is to analyze the cost implications of this behavior and discriminate between different environmental and policy factors on the basis of relative costs and critical management indicators.

### Scope

In any thesis research effort, it is necessary to identify the limitations of the project in order to keep the results in perspective.

First, this research uses a computer model as an aid to understanding real world systems, and such models have obvious limitations. The PP/AMM presented in this paper is an abstraction of the real world. The author has included in this model what his research and experience seem to him to be the important factors. The model is useful only as long as it is used within the analytical scope for which it was designed.

In the analysis presented in this thesis, the PP/AMM configures the pilot force into only five pilot job areas. They represent the rated supplement, the Undergraduate Pilot Training (UPT) instructor force, the tactical fighter (and miscellaneous) pilot force, the strategic bomber/tanker pilot force, and the airlift pilot force. The system training delays and flying time requirements are all averages. In order to avoid security classification, the crew manning factors are realistic estimates of the author. The size of the aircraft and pilot forces simulated in the model are arbitrary, but they are of realistic dimensions.

The second necessary limitation is on the range of analyses performed. In this study, three basic changes in the force are examined. The situations simulated and analyzed are force build-ups, force drawdowns, and accelerated force attrition rates. The research also includes a sensitivity analysis of certain relevent factors and an example of a policy change involving forecasting.

#### Development

Chapter II explains the approach used in developing the model and then gives a detailed description of it. Chapter III gives the results of simulations used to analyze the system. Finally, conclusions and recommendations are presented in Chapter IV.

## II. The Model

This chapter describes the AF PP/AMM. The first section gives a brief explanation of the methodological approach used in developing the model. The second section presents an overview of the model design. The third section is a detailed description of the model structure which is set forth in the areas of management emphasis. This forms the basis for the analyses performed.

## The Approach

Management systems, such as the pilot pipeline system, are so complex that a formal structure is needed to clarify ambiguities and to enable total system understanding. Systems Dynamics is the modeling methodology developed by J. W. Forrester of the Massachusetts Institute of Technology (MIT) and is based on information-feedback control theory. To support the need for systems dynamics methodology, Forrester states,

The general concepts of information-feedback systems are essential because such systems exhibit behavior as a whole which is not evident from examination of the parts separately. The pattern of system interconnection, the amplification caused by decisions and policy, the delays in actions and the distortion in information flows combine to determine stability and growth [Ref 3:16].

Systems Dynamics. The systems dynamics approach is applied through the use of DYNAMO III computer programming language. DYNAMO is used in continuous simulation models.

Each computation sequence occurs across time. Time is divided into equal time segments referred to as DT and defined as a constant in the DYNAMO model. As shown in Figure 1, "K" is used to designate the points

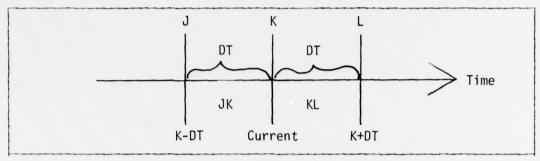


Figure 1. DYNAMO Time Sequence

in time to which the current computation applies. The use of time will become clearer as the level and rate equations are discussed.

Level equations (denoted by "L" on the left margin) represent a storage area for a resource. The current level stands for the previous quantity plus the flow in (IN.JK) and minus the flow out (OUT.JK) of it during the computation time increment DT. The level, Eq (1), would be read: the present level (at time K) is equal to the previous level (at time J) plus the net change due to the flows in and out during the time increment DT (time J to time K).

Note how this represents an integration.

Rate equations (denoted by "R" on the left margin) control the flows into and out of the levels. They are policies that remain constant over the time increment DT. The rate OUT, Eq (2), over the next time increment is equal to the current quantity in LEVEL divided by a constant called DELAY.

$$R OUT.KL = LEVEL.K/DELAY (2)$$

Rates use information to control the flows into and out of levels.

Figure 2 is a diagram to help visualize the relationships discussed above. An example would be a water tank with water flowing out and water flowing in. The rate of water flowing out would depend on the quantity in the tank and a constant delay.

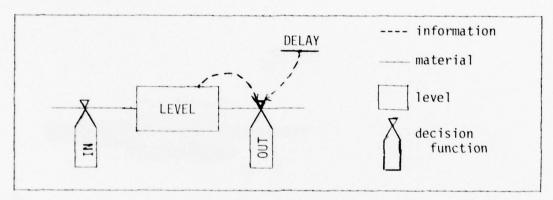


Figure 2. Level and Rate Diagram

The other types of equations used in building the model are auxiliaries (denoted by "A" on the left margin) which simplify the rate equations. The constant (denoted by "C" on the left margin), table (denoted by "T" on the left margin), and initial condition (denoted by "N" on the left margin) equations are used to input parameters and data into the model (Ref 4:21-22).

#### Overview

PP/AMM is a Systems Dynamics representation of the portion of the AF manpower, personnel, and training system relevant to planning and experiencing the recruitment, training, allocation, and attrition of pilots in the US Air Force.

First consider inputs and outputs. Pilots enter the system when they are recruited for undergraduate pilot training (UPT). The only way a pilot

can leave the system is through attrition from a job. The essence of the model is what happens between acquisition and attrition.

Pilot acquisitions flow from undergraduate pilot training to an assignment window (WIND) (Figure 3). This is a level equation and is increased by those pilots who have graduated from pilot training but are not yet at Combat Crew Training School (CCTS). The new pilot graduates are labeled UPT. The assignment window is also increased by pilots who are en route to upgrade-training and cross-training into new jobs, TOWIND. The rate pilots leave the window is called TOTRNG and is subtracted from the number in the window.

$$WIND.K = WIND.J + DT*(SUM(TOWIND.JK) + UPT.JK - SUM(TOTRNG.JK))$$
(3)

where

WIND = pilots in reallocation process
TOWIND = assignment rate from pilot catetory
UPT = mission pilot graduates
TOTRNG = assignment rate to training

Pilots move from WIND into a level containing those in training (TRNG). This level holds all pilots in training. It may be CCTS, instructor pilot upgrade, training for the rated supplement, or any other training that may be required. The level training is increased by the rate TOTRNG and decreased by the rate TOJOB.

L TRNG.
$$K(CAT) = TRNG.J(CAT) + DT*$$

$$(TOTRNG.JK(CAT) - TOJOB.JK(CAT)$$
(4)

where

TRNG = pilots in training
 CAT = category iteration index
TOTRNG = assignment rate to training
TOJOB = assignment rate to job

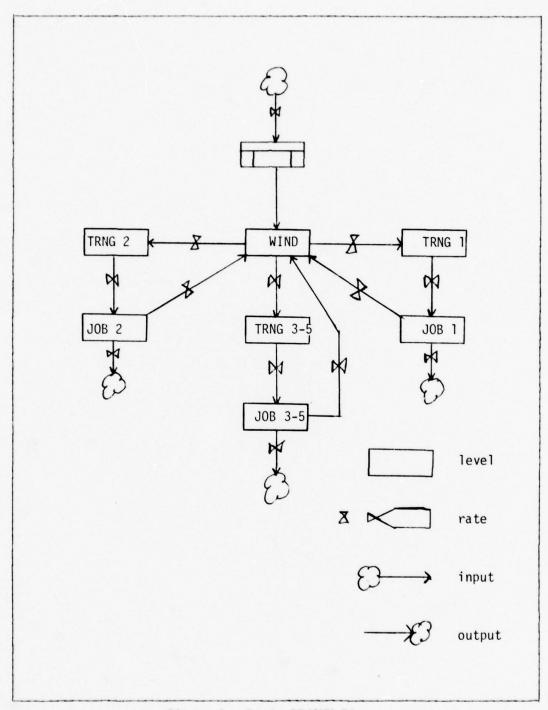


Figure 3. Basic PP/AMM Diagram

The level job (JOB) represents the part of the pilot force that is doing a particular job. Pilots flow from training into their job (TOJOB). Pilots may leave their job in two ways. First, they may leave in order to flow through the window (TOWIND) to training and then back into a job. The other flow from JOB is attrition out of the pilot force (ATT).

where

JOB = pilots in each category
CAT = category iteration index
TOJOB = assignment rate to job
TOWIND = assignment rate from pilot category

ATT = pilot attrition rate by category

The model is divided into five separate job categories. It uses an array structure so that JOB 1 through JOB 5 each represent a level in the model. The same is true of the levels for training, so that TRNG 1 through TRNG 5 are the five training flows into each job. WIND is a single level. There are actually five tracks from WIND, one to each training category. Track one flows to all jobs in the rated supplement. Track two flows between all levels affecting UPT instructor pilots. Tracks three, four, and five represent all mission pilots; they are sometimes referred to as the core force. Track three is roughly equivalent to all pilots in fighter, reconnaissance, and those not fitting into tracks four and five. Track four contains tanker and bomber pilots. Track five is for all transport pilots.

After a pilot is initially trained and enters the system from UPT through CCTS (aggregated in TRNG), he will go to a designated job requirement. Normally, he will cycle through additional training throughout his

career. Some training will be for upgrade and some for cross-training.

Mixing between tracks is allowed in the assignment window. All pilots
in the system are accounted for in one of the levels. As stated earlier,
the only way for a pilot to leave the system is through an attrition flow.

There are six basic rate equations in the model. "The rate equations state our perception of how the real system decisions respond to the circumstances surrounding the decision point" (Ref 5:10). The rates contain no pilots. They describe the rate of flow into and out of the three types of level—WIND, TRNG, JOB.

The discussion of rates will follow an expected flow for a pilot in the system. He is procured for pilot training, then moves into the window for assignment to a CCTS. He next moves to CCTS. Upon completing CCTS, he flows to his job. After doing a job for a period of time, he cycles back through the window to additional training. This training may be for upgrade to aircraft commander or instructor pilot to cross-training into another aircraft, or to move into a job in the rated supplement. This type of cycle continues until he leaves the pilot force. In this model, he leaves through the attrition rate (Figure 4). The rates TOTRNG, TOJOB, TOWIND, and ATT are active in each track; therefore, there are five rates called TOTRNG1 through TOTRNG5, etc.

The pilot production pipeline contains two rates. The number of students procured for pilot training (PREC) and the number of graduates from pilot training (UPT). Currently, 95 percent of those entering pilot training graduate. This figure is constant and is controlled by Air Training Command (ATC) by varying the amount of training given to weaker students. In order to simplify the model, a constant 95 percent graduation percentage is assumed. Therefore, PREC represents 95 percent

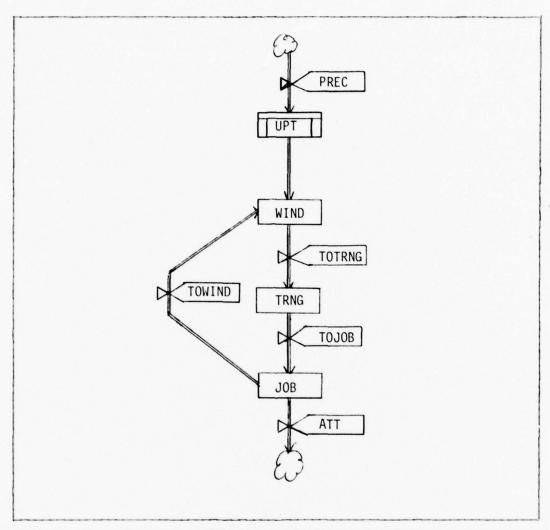


Figure 4. PP/AMM Rate Integration Diagram

of the total number recruited, and this will be the number eventually graduated. This is consistent with the computation of instructor/student ratios and amortization of procurement costs. The 5 percent washouts are merely deleted immediately, instead of spread out over the training period (Figure 5).

$$R UPT.KL = DELAY3(PREC.JK, TDEL.K) (6)$$

where

UPT = mission pilot graduates

PREC = pilot candidate recruiting rate

TDEL = average time through UPT pipeline

$$R PREC.KL = (CSIZE.K/4)*MREC.K (7)$$

where

PREC = pilot candidate recruiting rate

CSIZE = annual UPT class size

MREC = recruiting capacity

The UPT equation, Eq (6), represents the pilot candidate training process as a third-order exponential delay of the rate that the students are recruited. The resulting outflow represents the number of new pilots entering the window for job assignments each quarter. The UPT input reflects the two-year planning process for the UPT pipeline with some management flexibility as the need for new pilots changes. UPT is a rate into the assignment window (WIND).

TOTRNG is the rate from the assignment window to the training level. The rate into the rated supplement is computed differently than the other four tracks, but the CLIP function is used in each case. The CLIP function makes a choice between the first two arguments on the basis of the relationship between the last two arguments.

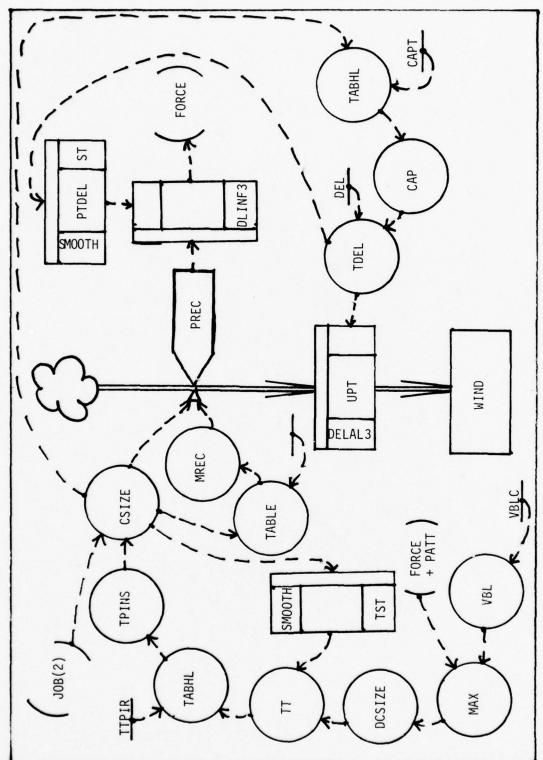


Figure 5. Pilot Production Pipeline

R TOTRNG.KL(1) = CLIP(INVSUP.K,INDISC.K(1),WIND.K,TONEED.K) (8) where

TOTRNG = assignment rate to training

INVSUP = pilots available for rated supplement

INDISC = projected assignments to jobs
WIND = pilots in reallocation process

TONEED = total required personnel for assignment

The rate into training for the rated supplement (TOTRNG(1)) is the number of pilots in the window in excess of the requirements for the other four categories of pilots if the number in the window is, in fact, greater than or equal to the total need. Otherwise, it gets a proportional share to maintain a viable supplement.

where

TOTRNG = assignment rate to training

PIL = index for flying jobs

NEED = personnel requirement in the rated supplement

INDISC = projected assignments to jobs

WIND = pilots in reallocation process

TONEED = total required personnel for assignment fills

The rate into training for each of the other four categories, TOTRNG (PIL), is equal to the need in each category as long as the number in the assignment window is greater than or equal to the total need. Otherwise, each category gets a proportional share of those pilots in the windown.

The next rate, TOJOB, determines the flow from the training level to the job level. It is a function of the number of pilots in training for each category of job and the average time required to complete the training (ATUGPD). The TEST12 and ATJTIME are test and policy variables in the model. The training delays are assumed to be constant for each category.

where

TOJOB = assignment rate to job CAT = category interation index

TRNG = pilots in training

ATUPGD = average time in upgrade/reassignment pipeline

ADJTIME = average time to adjust pilot force

There are two ways for a pilot to depart his job. Normal career progression would put him in the assignment window for upgrade or crosstraining (TOWIND). Also, a pilot may leave the pilot force by some form of attrition. The assignment rate to the window depends on the number of pilots in the job and the average time in the job modified by the ratio of the number in the job to the desired number in the job (DFORCE). The result is a larger time in a job as the desired number in the job increases.

R TOWIND.KL(CAT) = 
$$(JOB.K(CAT)*JOB.K(CAT))/$$
  
 $(DFORCE.K(CAT)*ATJ.K(CAT))$  (11)

where

TOWIND = assignment rate from pilot category

CAT = category interation index

JOB = pilots in each category

DFORCE = desired force size by mission

ATJ = average time in job

The other way to leave a job is through an attrition which causes the pilot to leave the system entirely. In order to simplify the model, all attrition is removed from the job level. Attrition from the pilot pipeline system is the result of such things as death, removal from flying status, promotion to 06 (colonel), and voluntary or involuntary separations. The overwhelming majority of these losses would occur from the job level. The few losses from the assignment window or training levels

would be replaced from the pilots in the job level, in most cases. Very little is lost by accounting for the remainder of these losses from the job level.

where

ATT = pilot attrition rate by category

CAT = category interation index

JOB = pilots in each category

ATTRATE = programmed attrition rate by category

ATTADJ = attrition adjustment factor

ATADJTM = attrition rate adjustment time by category

TEST4 = test on attrition rate

The attrition rate is calculated as a percentage of the number in each job category and modified by an attrition adjustment factor (ATTADJ). The attrition adjustment reflects a limited ability to adjust pilot attrition when the desired force is different from the projected force. Thus, when pilots are scarce, separations are reduced; and when there are extra pilots available, separations are increased through actions such as early out and reduction-in-force (RIF) programs.

#### Areas of Management Emphasis

The model is divided into five areas of management emphasis: force structure by pilot type, pilot production pipeline, assignment/reassignment control, force size policy, and force management parameters.

Force Structure by Pilot Type. Force structure by pilot type has been explained by discussing the levels and rates in the model. It is worthwhile to examine a casual-loop diagram (Figure 6) to further explain the structure of the model. Consider a specific job skill. Pilots are

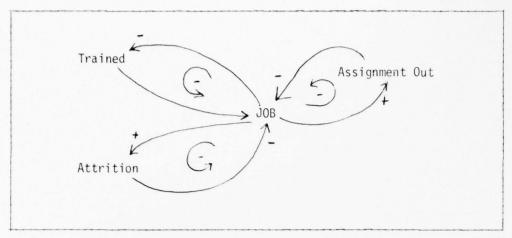


Figure 6. Casual-Loop Diagram for Model Structure

lost due to assignment out or attrition. They are gained by being trained to do the job. Notice each loop is a negative feedback loop, which indicates goal-seeking behavior (Ref 6:37). For example, an increase in the inflow rate will increase the number in a given job. As the number in the job is increased, however, the number leaving by attrition will tend to increase. But, as attrition is increased, the number in the job will increase at a decreasing rate. The overall effect would be to stablize the number in the job where inflows equal outflows from attrition.

In this model, when a pilot leaves a job for reassignment, he must be trained for another job; he is not lost from the system. The training and allocation structure is driven by the need for pilots in a job skill. The overall system receives pilots via an undergraduate pilot training input. To complete the force structure, consider the effects of the need for personnel in another job. Figure 7 demonstrates the casual-loop structure for a job.

The remaining equations describing the force structure are the value initialization equations. The initial value equations establish values

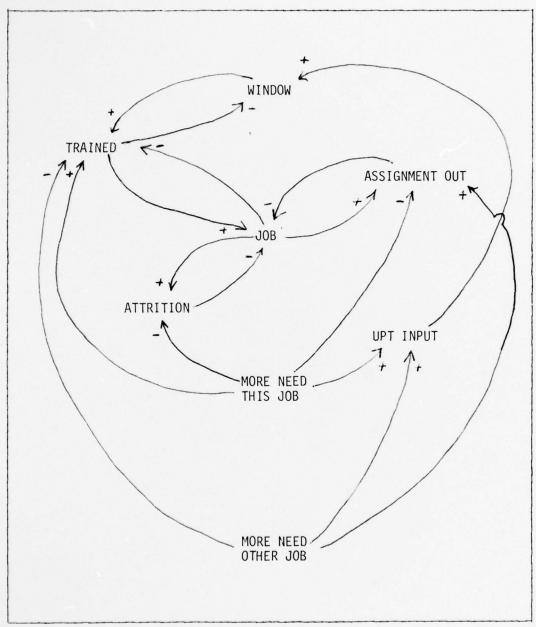


Figure 7. Casual-Loop Diagram for Completed Force Structure

for the force levels to start the model running in equilibrium, i.e., where all levels are maintained constant.

$$N \qquad WIND = SUM(IWIND) \tag{13}$$

where

WIND = pilots in reallocation process IWIND = pilots in job for reassignment

N 
$$IWIND(CAT) = ATT(CAT) + JOBI(CAT)/ATJC(CAT)$$
 (14)

where

IWIND = pilots in job for reassignment

CAT = category interation index

ATT = pilot attrition rate by category JOBI = initial force size by category

ATJC = average time in job by category

where

TRNG = pilots in training

CAT = category iteration training

ATUPGD = average time in upgrade/reassignment pipeline

IWIND = pilots in job for reassignment

$$N \qquad JOB(CAT) = JOBI(CAT) \tag{16}$$

where

JOB = pilots in each category

CAT = category iteration index

JOBI = initial force size by category

$$N \qquad ATT(CAT) = JOB(CAT) * ATTRATE(CAT)$$
 (17)

where

ATT = pilot attrition rate by category

CAT = category iteration index

JOB = pilots in each category

ATTRATE = programmed attrition rate by category

By setting initial values for each category of the force (JOBI), the model starts off with no impetus for change—all model variables are at their goal. Since values for JOBI specify the number of pilots in each job, the initial attrition rate is specified as a percentage of the number in each job category (ATTRATE is a constant for each category of job). The initial window figure in each category is computed since average time in job (ATJC) is constant, JOBI is specified, and ATT has been computed. The initial window quantity is the sum of the initial window figures in each category. The beginning number in each training category uses the initial window figure times the average time in reassignment pipeline (a given constant). Figure 8 shows the composite representation of the force structure. Note that for each category of flying job (2-5) the logic is the same; however, the logic for the rated supplement changes in computation of the rates TOWIND and TOTRNG.

<u>Pilot Production Pipeline</u>. Refer to Figure 5 during the discussion of the pilot production pipeline. It will give a visual representation of this model area.

The pilot production pipeline determines the rate at which new UPT inputs enter the assignment window. It is the source of the external input of pilots into the system. The model beings with a recruiting rate for personnel (PREC) for pilot training [Eq (7)]. The recruiting rate is a function of the programmed annual UPT class size (CSIZE) and a recruiting capacity multiplier (MREC).

$$CSIZE.K = JOB.K(2)*TPINS.K$$
 (18)

where

CSIZE = annual UPT class size

JOB = pilots in each category TPINS = UPT student/instructor ratio

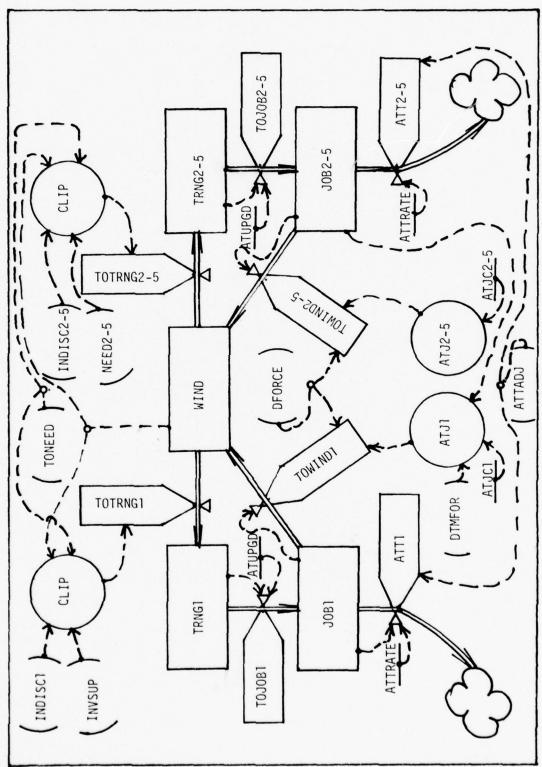


Figure 8. Force Structure

The annual UPT class size depends on the number of UPT instructor pilots [JOB.K(2)] and the student-to-instructor ratio (TPINS.K). The student-to-instructor ratio comes from a function specified by TPINS.K; it is a function of the difference between the desired and recent, actual UPT class sizes.

A TPINS.K = TABHL (TTPIR, 
$$TT.K, 0, 1.75, .25$$
) (19)

where

TPINS = UPT student/instructor ratio TTPIR = student/instructor ratio TT = class size adjustment factor

T TTPIR = 
$$0/.47/.94/1.41/1.88/2.35/3.15/4.0$$
 (19.1)

where

TTPIR = student/instructor ratio

If the desired class size is larger than recent class sizes, the student-to-instructor ratio is allowed to increase in order to increase UPT output. The class size adjustment factor, TT, is used to determine the ratio between desired and recent class sizes (Figure 9).

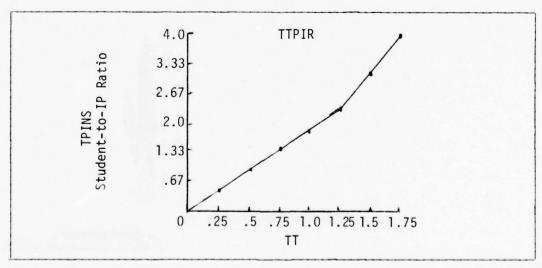


Figure 9. Class Size Adjustment Factor

A TT.K = DCSIZE.K/SMOOTH(CSIZE.K, TST) (20)

where

TT = class size adjustment factor

DCSIZE = desired UPT class size
 CSIZE = annual UPT class size

ST = smoothing times

The adjustment factor increases if an exponential average of the class sizes for the last quarter is smaller than the desired class size (DCSIZE).

A DCSIZE.K = 
$$MAX(FORCE.K + PATT.K, VBL.K)$$
 (21)

where

DCSIZE = desired UPT class size

FORCE = programmed force size minus actual force size

PATT = projected annual attrition

VBL = class size for viable UPT operation

The desired UPT class size will be the maximum of the sum of FORCE.K and projected annual attrition (PATT) and a minimum class size for UPT operation (VBL). FORCE.K is the discrepancy between programmed force size and the actual force size. Hence, desired class size will replace the net of projected attrition and the objective force minus the actual force. However, desired class size will always remain large enough to keep a UPT operation sustained. The viable UPT class size is initialized as a constant (VBLC=400) arbitrarily and can be adjusted over time using the TEST8 equation.

A 
$$VBL.K = VBLC + TEST8.K$$
 (22)

where

VBL = class size for viable UPT operation

VBLC = minimum viable UPT class size

TEST5 = test on viable UPT class size

The desired student-to-instructor ratio is initialized by Eq (24).

N TPINS = TPINSI 
$$(23)$$

where

TPINS = UPT student/instructor ratio
TPINSI = desired student/instructor ratio

TPINSI is set at 1.88. For each UPT unit, a fixed number of instructors is needed in staff and academic roles. There is also a variable number of instructors needed, depending on the number of students. The overall factor is very close to 1.88 and can be verified by ATC planning documents.

The other part of the recruiting rate is the recruiting capacity multiplier (MREC). The recruiting rate is the quarterly recruiting capacity multiplier times one-fourth the annual UPT class size. The model assumes the availability of recruits for pilot training.

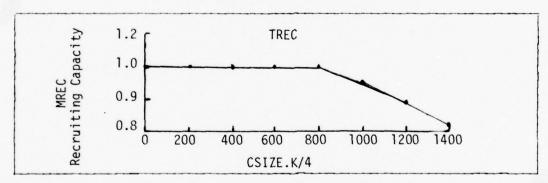


Figure 10. Recruiting Capacity Multiplier

where

MREC = recruiting capacity
CSIZE = annual UPT class size

TREC = class size adjust factor for UPT recruiting

T TREC = 
$$1/1/1/1/1.95/.89/.82$$
 (24.1)

where

TREC = class size adjust factor for UPT recruiting

It is assumed that the Air Force can meet a recruiting goal of 800 per quarter; after 800, a decreasing portion of the additional quota can be met. Limited resources and different recruiting capacities can be simulated by changing the values of the table TREC. The recruiting rate is the main inflow into the UPT rate (UPT.KL), Eq (6). The average time it takes to flow through the training process is the magnitude of the delay (TDEL.K).

A TDEL.K = 
$$CAP.K*DEL$$
 (25)

where

TDEL = average time to change UPT pipeline CAP = capacity factor for UPT training delay

DEL = initial average time

This factor is based on a normal time (DEL=7) of just less than the two-year budgeting requirements and CAP.K the capacity utilization factor for UPT training delay. The capacity utilization factor increases throughout time for large annual class sizes and decreases the time for smaller class sizes. Annual class sizes of 2,000 give a TDEL of exactly seven quarters.

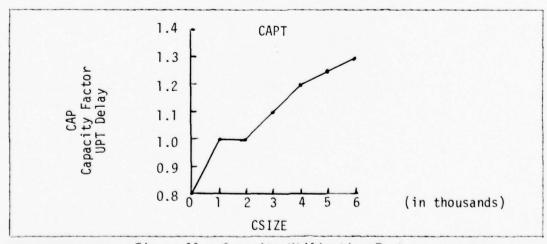


Figure 11. Capacity Utilization Factor

A 
$$CAP.K = TABHL(CAPT, CSIZE.K, 0, 6000, 1000)$$
 (26)

where

CAP = capacity factor for UPT training delay CAPT = capacity utilization factor UPT training delay CSIZE = annual UPT class size

T CAPT = 
$$.8/1/1/1.1/1.2/1.25/1.3$$
 (26.1)

where

CAPT = capacity utilization factor UPT training delay

A projected UPT graduation rate, PUPT.KL, is calculated for planning purposes. It uses an exponential of the UPT delay factor (PTDEL) over eight quarters (ST). The projected graduation rate is used to compute FORCE.K in the force management parameters. Force management parameters are discussed after the force size policy structure is introduced.

A PUPT.K = DLINF3(PREC.JK, PTDEL.K) 
$$(27)$$

where

PUPT = projected UPT graduates
PREC = pilot candidate recruiting rate
PTDEL = perceived training delay

A PTDEL.K = 
$$SMOOTH(TDEL.K,ST)$$
 (28)

where

PTDEL = perceived training delay

TDEL = average time through UPT pipeline

ST = smoothing times

Assignment/Reassignment Control. Assignment/reassignment control is a series of auxiliary equations that provide information to the decision about the assignment rate into training for each category (TOTRNG). First, selection for the rated supplement is discussed;

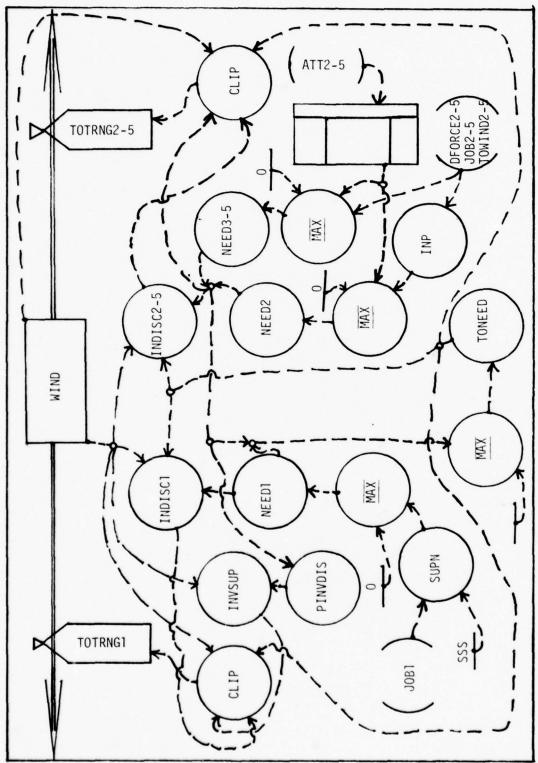


Figure 12. Assignment/Reassignment Control

next, the other four categories are discussed together. The number to be trained for rated supplement jobs is determined by Eq (8). Four values are needed to compute this rate—WIND, TONEED, INVSUP, and INDISC (1). WIND has previously been described as the level in the reassignment pool plus the rates TOWIND and UPT and minus the rates TOTRNG. The number in the reassignment window is compared to the total need (TONEED) to be met for other reassignments; the difference will be sent to the supplement.

A TONEED.K = 
$$MAX(1,SUM(NEED.K))$$
 (29)

where

TONEED = total required personnel for assignment fills NEED = personnel requirement in the rated supplement

TONEED is computed by a MAX function. It selects the larger number of one or the sum of the needs in the five individual categories. The need for each category must be computed. They result from three different equations, which all use the MAX function to avoid negative needs.

A NEED.
$$K(1) = MAX(0, SUPN.K)$$
 (30)

where

NEED = personnel requirement in the rated supplement SUPN = critical rated supplement

A NEED.K(2) = 
$$MAX((INP.K + SMOOTH(ATT.JK(2), AST)),0)$$
 (31)

where

NEED = instructor requirements

INP = projected instructor pilot needs

ATT = pilot attrition rate by category

ST = smoothing times

where

NEED = pilot requirements by category
MPIL = index for noninstructor flying jobs
DFORCE = desired force size by mission
 JOB = pilots in each category
TOWIND = assignment rate from pilot category
 ATT = pilot attrition rate by category
 ST = smoothing times

The need for the rated supplement NEED.K(1) is determined using a critical number which assumes that certain rated supplement jobs are absolutely critical to the Air Force mission (SUPN). This number is arbitrarily set at 500 (SSS) so that NEED(1) will be the difference between 500 and the number in the supplement JOB(1), if there are less than 500 in the supplement. Otherwise, NEED(1) will be zero. Normally, many more pilots than 500 are kept in the supplement to meet war-time surge requirements.

where

SUPN = critical rated supplement SSS = viability level for rated supplement JOB = pilots in each category

NEED(2) is instructor pilot requirements. It is a function of projected instructor pilot needs (INP.K) and a projected attrition from the instructor force. Instructor pilot needs are computed as the desired instructor pilot force size (explained in the section on force size policy) minus the number in the job plus the number leaving to the assignment window.

A INP.K = DFORCE.K(2) - JOB.K(2) + TOWIND.JK(2) (34)

where

INP = projected instructor pilot needs

DFORCE = desired force size by mission

JOB = pilots in each category

TOWIND = assignment rate from pilot category

NEED(MPIL) describes the requirements for the three pilot categories comprising the mission pilot force. It is computed in the same way as INP.K with an added factor for attrition. Separating these equations merely adds more flexibility to the model design. The sum of the five needs is the total need.

If the total need is less than the number of pilots in the assignment window, the rate to training for the supplement is equal to the pilots available for the supplement (INVSUP.K). If the number in the assignment window is less than the total need, then a share (INDISC.K(1)) is allotted to training for the supplement. INVSUP.K is computed as the number in the assignment window less those needed for flying jobs (PINVDIS.K). PINVDIS.K is the sum of the needs in all categories except the supplement.

A 
$$INVSUP.K = WIND.K - PINVDIS.K$$
 (35)

where

INVSUP = pilots available for rated supplement

WIND = pilots in reallocation process

PINVDIS = assignments to flying jobs

A PINVDIS.K = SUMV(NEED.K,2,TCAT) 
$$(36)$$

where

PINVDIS = assignments to flying jobs

NEED = personnel requirement in the rated supplement

TCAT = categories of pilot jobs

In the second situation, those assigned to training for the supplement is a proportion of the pilots in the window (INDISC).

A INDISC.
$$K(CAT) = (NEED.K(CAT)/TONEED.K)*WIND.K$$
 (37)

where

INDISC = projected assignments to jobs

CAT = category iteration index

NEED = personnel requirement in the rated supplement

TONEED = total required personnel for assignment fills

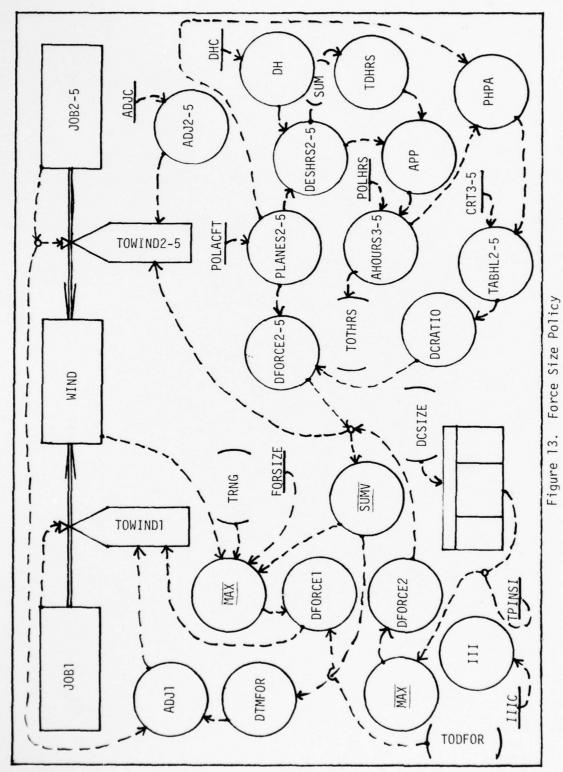
WIND = pilots in reallocation process

The proportion is the ratio of the category need to the total need. Note that the need for the supplement is relatively small (normally zero) so that when those pilots in the window are less than the total need the rated supplement gets few or no inputs. This completes the discussion of the logic for the rate TOTRNG(1).

The logic for the other four categories (TOTRNG(PIL)) will now be discussed. See Eq (9). The only difference in the logic for these categories [from TOTRNG(1)] is if the total need is less than or equal to the number in the assignment window each category is allotted its need. The rest go to the rated supplement; that value is INVSUP.K as computed above.

The rated supplement thus acts as a reservoir to meet war time and contingency requirements. The model very closely approximates the actual requirements computation process of the pilot pipeline management system (Ref 2, 13).

Force Size Policy. The force size policy structure generates factors that set and adjust authorized force strength. The description of this area is organized around the rates TOWIND and is divided into two parts. The first part eminates from the rate to the window for all



flying jobs (TOWIND(PIL)). The second part explains the rate to the window for the rated supplement (TOWIND(1)). See Eq (11) for a listing of TOWIND. It depends on the number in each job, an average time in job (ATJ), and the desired force in each job (DFORCE). The level JOB has been described previously. The variable ATJ will be discussed first, followed by DFORCE in both parts of the description in this section.

For all flying jobs, ATJ (2-5) is a constant ATJC. This constant is four years for UPT instructor pilots and three years for the core pilots; it can be varied with a test input, TESTII.

where

ATJ = average time in job PIL = index for flying jobs

ATJC = average time in job by category

TESTI1 = test on average time in flying category

This is set arbitrarily and should be varied as a desired exogenous variable in system.

The desired pilot force in each flying job (DFORCE) is computed differently for UPT instructor pilots and the mission pilots (MPIL). The desired force for UPT instructor pilots is a MAX function. It is the larger of the force based on desired UPT class size (DCSIZE) and the minimum viable instructor force size (III). Desired instructor force based on class size is calculated by taking the smoothed average of desired class size (DCSIZE) per quarter (CST=1) and dividing by the desired student-to-instructor ratio (TPINSI). This computes the number of instructors desired. Desired class size and student-to-instructor ratio have been explained in the pilot production pipeline description.

A DFORCE.K(2) = MAX((SMOOTH(DCSIZE.K,CST)/TPINSI),III.K) (39)

where

DFORCE = desired force size by mission

DCSIZE = desired UPT class size

ST = smoothing times

TPINSI = desired student/instructor ratio

III = minimum instructor force for UPT viability

The minimum viable instructor force size (III) is specified as a user input and can be modified with the TEST9 function. The normal value is 200 instructor pilots to accommodate five UPT bases.

A III.K = IIIC + TEST9.K 
$$(40)$$

where

III = minimum instructor force for UPT viability

IIIC = viable force level instructor pilot

TEST9 = test on instructor force minimum viability

The desired pilot force in each of the mission pilot categories is a function of the number of planes in each category times a crew ratio required to fly programmed hours (DCRATIO).

where

DFORCE = desired force size by mission

MPIL = index for noninstructor flying time

DCRATIO = desired crew ratio to fly programmed hours

PLANES = active aircraft by mission

where

PLANES = active aircraft by mission

MPIL = index for noninstructor flying jobs

POLACFT = active aircraft by category TEST2 = test on number of aircraft

The number of mission aircraft assigned is a constant, POLACFT, and can be changed using the TEST2 function. No value for PLANES is used in the rated supplement or instructor force; zero values must be specified to prevent error statements in the program. The same is true for AHOURS, APP, DESHRS, DH, and DCRATIO.

The meaning of desired crew ratio has been modified for this model. It is a crew factor that combines the number of pilots per aircraft aircrew and the desired crew ratio. These figures are meant to be gross everages for the three mission categories giving the desired number of pilots per aircraft. For example, in the fighter, reconnaisance, miscellaneous category (FRM), a crew factor of 1.25 indicates an average of 1.05 pilots per aircrew with an average crew ratio of 1.19 per aircraft. The crew factor is the product of the crew ratio and number of pilots per crew. The value for desired crew factor for the FRM category comes from the crew table for crew fighters (CRT3).

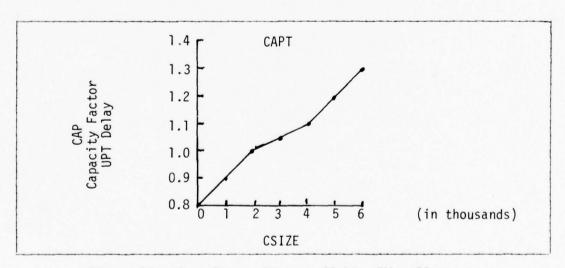


Figure 14. Crew Factor Diagram Fighter/Miscellaneous

where

DCRATIO = desired crew ratio to fly programmed hours

CRT3 = crew table fighters

PHPA = programmed flying hours per aircraft

T 
$$CRT3 = 0/.5/1/1.25/1.5/2/2.5$$
 (43.1)

where

CRT3 = crew table fighters

As the flying hours per aircraft, PHPA, are increased so is the desired number of pilots per aircraft. See Appendix A for a similar discussion describing DCRATIO (4) and (5).

where

PHPA = programmed flying hours per aircraft

CAT = category iteration index

AHOURS = authorized mission flying hours

PLANES = active aircraft by mission

Programmed flying hours per aircraft, AHOURS, is the authorized mission flying hours per category divided by the number of active mission aircraft, PLANES. PLANES is an exogenously determined constant.

A AHOURS.
$$K(MPIL) = POLHRS*APP.K(MPIL)*TEST1.K(MPIL)$$
 (45)

where

AHOURS = authorized mission flying hours

MPIL = index for noninstructor flying jobs

POLHRS = total programmed flying hours

APP = flying hours apportioning factor

TEST1 = test on authorized hours

AHOURS is a function total programmed flying hours, POLHRS, and an apportioning factor, APP. It can be modified by the TEST1 function.

A APP.K(MPIL) = DESHRS.K(MPIL)/TDHRS.K (46)

where

APP = flying hours apportioning factor

MPIL = index for noninstructor flying time

DESHRS = desired flying hours per aircraft for proficiency

TDHRS = total desired mission flying hours

The apportioning factor is the ratio of the desired minimum flying hours for each mission category, DESHRS, to the total of the desired minimum flying hours for all mission categories, TDHRS.

A DESHRS.
$$K(MPIL) = DH.K(MPIL)*PLANES.K(MPIL)$$
 (47)

where

DESHRS = desired flying hours per aircraft for proficiency

MPIL = index for noninstructor flying jobs

DH = desired flying hours per aircraft

PLANES = active aircraft by mission

The desired hours by category are dependent on the number of planes in each category and the desired flying hours per aircraft, DH. The desired hours per aircraft is an exogenous input, DHC, that can be modified by the TEST10 function.

A DH.K(MPIL) = DHC(MPIL) 
$$\star$$
TESTIO.K(MPIL) (48)

where

- DH = desired flying hours per aircraft

MPIL = index for noninstructor flying time

DHC = desired flying hours per aircraft for crew proficiency

TEST10 = test on desired flying hours

The total desired flying hours is the sum of the desired minimum flying hours for each mission category.

A TDHRS.K = SUMV(DESHRS.K, 3, TCAT) (49)

where

TDHRS = total desired mission flying hours

DESHRS = desired flying hours per aircraft for proficiency

TCAT = categories of pilot jobs

The above sequence of logic generates the desired flying force size. This is an important factor in determining the rate of assignments out of a flying job. The other factors are the number in each job and the desired average time in the job.

The second part of the force size policy covers the rate at which pilots in the rated supplement enter the assignment window. The same basic equation for TOWIND applies; however, the average time in job and desired force are computed differently. The constant ATJC is three years. It is adjusted depending on how well the mission force is manned. The manning factor is given by the sum of all pilots in a flying job divided by the sum of the desired force size for flying jobs, DTMFOR. A higher manning ratio for the flying force gives a relatively longer average time in supplement jobs.

A ATJ.K(1) = ATJC(1)\*(SUMV(JOB.K,2,TCAT)/
$$DTMFOR.K)*TEST11.K(1)$$
(50)

where

ATJ = average time in job

ATJC = average time in job by category

JOB = pilots in each category TCAT = categories of pilot jobs

DTMFOR = desired total mission force

TEST11 = test on average time in flying category

A DTMFOR.K = SUMV(DFORCE.K, 2, TCAT) (51)

where

DTMFOR = desired total mission force
DFORCE = desired force size by mission
 TCAT = categories of pilot jobs

A DFORCE.K(1) = MAX(FORSIZE - SUMV(DFORCE.K,2,TCAT)
- SUM(TRNG.K) - WIND.K,SSS) (52)

where

DFORCE = desired force size by mission FORSIZE = programmed total force size

TCAT = categories of pilot jobs

TRNG = pilots in training

WIND = pilots in reallocation process

SSS = viability level for rated supplement

The desired force in the rated supplement is a MAX function. It is never less than the viability level for the rated supplement (SSS=200). Normally, the desired force in the rated supplement is the remainder of the pilots after the desired flying force, those in training, and the assignment window have been subtracted from the desired force size.

Current Force Management Parameters. Current force management centers on adjusting the force size if it does not match the programmed force ceiling. The main ways to manage the force size stem from the inputs and outflows of the system. Since attrition seems to be the quickest way to impact the total force, discussion will begin with the equations which control the attrition rate. As noted before, pilot attrition by category, ATT, is a function the number in each job category times a normal attrition rate (ATTRATE=.02/quarter) modified by an attrition adjustment factor, ATTADJ. The constant ATTRATE was chosen to be about the Air Force average of 8 percent per year. It is easily modified with the TEST4 function.

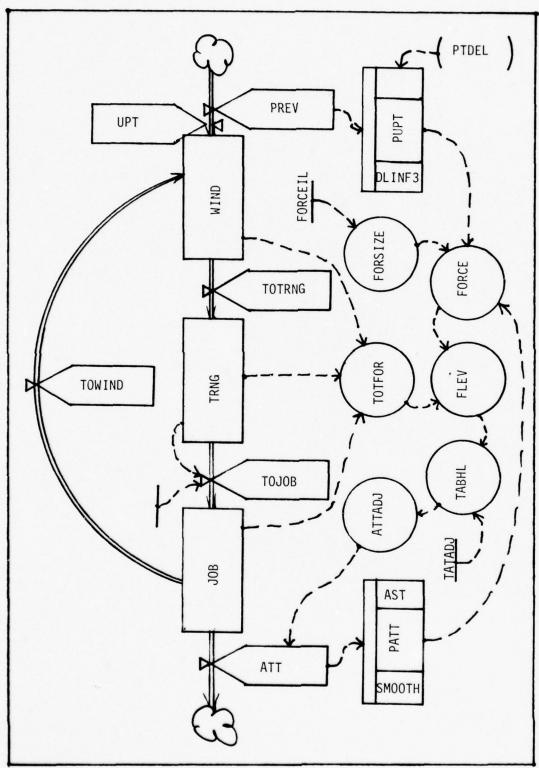


Figure 15. Current Force Management Parameter

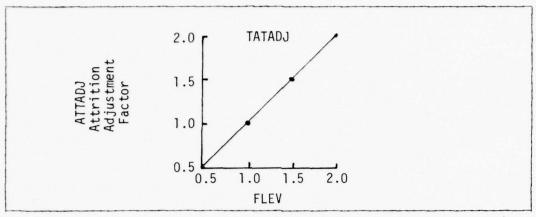


Figure 16. Attrition Adjustment Table

A ATTADJ.
$$K(CAT) = TABHL(TATADJ, FLEV.K, .5, 2, .5)$$
 (53)

where

ATTADJ = attrition adjustment factor

CAT = category iteration index

TATADJ = attrition rate adjustment table

FLEV = force level factor for attrition adjustment

TATADJ = 
$$.5/1/1.5/2$$
 (53.1)

where

TATADJ = attrition rate adjustment table

The attrition adjustment factor increases attrition as the force level factor for attrition adjustment, FLEV, increases based on the relation specified by the TATADJ table.

where

FLEV = force level factor for attrition adjustment

CAT = category iteration index

TOTFOR = total pilot force

FORCE = programmed minus actual force size

The force level factor is a function of the total pilot force, TOTFOR, and the projected force discrepancy. The total pilot force is the sum of all pilots in the levels of the model.

A TOTFOR.K = 
$$SUM(JOB.K) + SUM(TRNG.K) + WIND.K$$
 (55)

where

TOTFOR = total pilot force

JOB = pilots in each category

TRNG = pilots in training

WIND = pilots in reallocation process

The projected force discrepancy, FORCE, subtracts from the programmed total force size the total projected pilot force.

A FORCE.K = FORSIZE.K-(TOTFOR.K-PATT.K) - 
$$4*PUPT.K$$
 (56)

where

FORCE = programmed minus actual force size

FORSIZE = programmed total force size

TOTFOR = total pilot force

PATT = projected annual attrition

PUPT = projected UPT graduates

The actual force size, TOTFOR, minus a projected annual attrition, PATT, plus the projected annual input, 4\*PUPT, is the projected annual force size. Thus, when the projected force is larger than the programmed force, the projected force discrepancy is a negative value. The projected force is a positive value when projected force is smaller than programmed force. Operating through FLEV, the attrition adjustment increases attrition when projected force is too large and reduces attrition when the projected force is too small.

A FORSIZE.K = FORCEIL + TEST7.K (57)

where

FORSIZE = programmed total force size
FORCEIL = Congress imposed pilot force ceiling
 TEST7 = test on programmed total force size

Programmed total force size, FORSIZE, is a constant, FORCEIL, that can be changed by the TEST7 function.

The equation for the projected UPT graduates was described in the pilot production pipeline section. The equation for the projected annual attrition, PATT, is four times a smooth of the total quarterly attrition over the past four quarters, AST=4.

A PATT.K = 4\*SMOOTH(SUM(ATT.JK), AST) (58)

where

PATT = projected annual attrition

ATT = pilot attrition rate by category

ST = smoothing times

## III. Analysis and Results

This chapter documents the analysis and results of testing the PP/AMM. Determinations with respect to its validity are largely a subjective judgement (Ref 3:123). A judgement has to be made about how well the model generates behavior consistent with the pilot procurement/assignment management system in areas relevant to policy analysis. The model should show the direction and relative magnitude of major changes in system characteristics due to exogenous inputs or alternatives in policy. The results of the simulations used in the analysis are presented in this chapter under three main headings: general analysis, situational analysis, and policy forecasting analysis.

## General Analysis

The first area of analysis introduces the cost module and discusses model equilibrium. This information provides a basis for further analysis.

Cost Module. This section describes the cost module attached to the model. The cost module was developed to provide relative cost information to help evaluate different management policies; it is not intended to give absolute estimates of future costs. Therefore, the numbers used are weighted averages and they are rounded off. Only current costs associated directly with the pilot resource that change with policy are included. For example, costs for allotted mission flying hours are not included. Management policy relative to the pilot resource should not change the cost of mission flying hours. Congress appropriates funds to pay for a specific number of mission flying hours. Mission flying hours are used for proficiency training. The total flying hours appropriated are always

used in order to maximize pilot proficiency; management only impacts the proficiency flying hours available to each pilot, not the total cost. Conversely, pilot salary costs are included because management policies will impact the actual force size. An increasing force size will tend to increase the total salary cost. The cost module monitors six types of flows. It also accumulates total costs and total discounted costs.

The first cost category covers recruiting, precommissioning training, and accession travel costs (RCOST). The three sources of commissioning for Air Force pilot acquisitions are the USAF Academy (USAFA), Reserve Officer Training Corp (ROTC), and Officer Training School (OTS). The model does not attempt to discriminate between acquisitions by source. The actual ratio of each source varies, as does the actual cost per graduate. The costs in this area were taken from Air Force Manual (AFM) 173-10. The cost of a USAFA graduate is more than eight times the cost of an OTS acquisition. However, the USAFA graduate will enter active service whether or not he or she becomes a pilot resource. The majority of this RCOST is not influenced by the management of the pilot force. Similar arguments may be made about the RCOST for the other pilot acquisitions. Obviously, management of the pilot resource does influence the number of acquisitions needed in the Air Force. For this reason, the RCOST element is set approximately equal to the typical acquisition cost of an OTS graduate (the smallest of the three sources). See Table I for a compilation of this cost. The level RCOST.K is increased by the increment RECR.J. The term RECR.K is equal to RCR.K times the number of recruited pilot candidates each quarter. Note the level RCOST is a cumulative figure; and, for ease of model manipulation, RCF.K is equal to the constant RCFK, which is \$13,000. The same computational scheme is used in each of the six cost areas.

TABLE I RCOST

USAFA	\$103,000	\$1,100	\$800
ROTC	13,800	1,100	800
OTS	11,100	1,100	800

A RECR. 
$$K = PREC. K*RCF. K$$
 (59)  
L RCOST.  $K = RCOST. J + DT*RECR. J$  (59.1)  
N RCOST = 0 (59.2)

where

RCOST = recruiting costs

The next area accounts for UPT costs for each student (UCOST). The cost of UPT is taken from data used in the DPXXA computer model used at the Pentagon and verified by Captain Michael Carpenter of the AF Manpower and Personnel Center (AFMPC). The variable UPTT.K produces the total UPT cost by using the number of UPT graduates (UPT.JK) times the cost per graduate (UCF.K=\$235,000). After UPT, additional specialized training is required and is accounted for in the next category.

where

UCOST = UPT costs

The same source is used for the cost data for specialized training. This area accounts for Combat Crew Training Schools (CCTS) and any other training such as Squadron Officer School (SOS), Instructor Pilot Instrument School (IPIS), and Aircraft Commander Upgrade School (PUPS). All specialized training is accounted for. The cost of specialized flying training is overwhelmingly significant. The average cost of the first CCTS is about \$248,000. The cost of nonflying training is negligible in comparison. The average cost used for all specialized training in the module is \$215,000 (TCF.K). This is approximately a 15 percent reduction of the CCTS cost and reflects about a 15 percent rate of nonflying training. The variable TCOST accumulates the specialized training costs. It is added incrementally by multiplying the average cost times the number of pilots leaving training, SUM(TOJOB.JK).

A TRAIN.K = 
$$SUM(TOJOB.JK)*TCF.K$$
 (61)

L 
$$TCOST.K = TCOST.J + DT*TRAIN.J$$
 (61.1)

$$N \qquad TCOST = 0 \tag{61.2}$$

where

TCOST = CCTS cost

The fourth cost area accounts for the additional expenses associated with permanent change of station (PCS) and temporary duty travel (TDY) (PCOST). The data for these costs comes from AFM 173-10. The PCOST increment, PCS, equals the number of pilots in the assignment window times the additional expenses factor, PCF.

A 
$$PCS.K = WIND.K*PCF.K$$
 (62)

L 
$$PCOST.K = PCOST.J + DT*PCS.J$$
 (62.1)

$$N PCOST = 0 (62.2)$$

where

PCOST = PCS costs

The PCS cost per move for officers in fiscal year (FY) 1978 is \$3,171. The TO/FM Other Flying factor is \$1,364. A weighted average is used which sets PCF.K equal to \$2,000. Less than half of the moves are considered to be PCS. All other costs associated with TDY and PCS travel are considered accounted for in the TCOST area.

The next area accounts for active duty pay. There is a wide range of pay grades within the pilot resource, but the model does not distinguish between pilots by pay grade. Therefore, the AFM 173-10 rated pay factors table provided the salary that is used. Actual average pilot salary is quite variable over time since, as retention declines, the average pay would decrease with the age mix of the pilot force. An annual factor of \$24,000 (\$6,000 quarterly) is drawn from the pay factor table to account for average pilot salary, SCOST. The quarterly salary cost, SAL.K, is the total active force, TOTFOR.K, times the average salary factor per quarter, SCF.K=\$6,000. SCOST is then the aggregate of the quarterly costs for salary.

A SAL.K = TOTFOR.K\*SCF.K 
$$(63)$$

$$L \qquad SCOST.K = SCOST.J + DT*SAL.J \qquad (63.1)$$

$$N \qquad \qquad SCOST = 0 \tag{63.2}$$

where

SCOST = pilot salaries

The last of the six cost areas adds the cost of attrition to the pilot resource. A pilot promoted from lieutenant colonel to colonel, or a pilot removed from flying status is considered a loss to the pilot force in the model. Either of these cases may or may not have any cost. A certain amount of attrition results from factors (such as retirement) that management policy only indirectly effects. The cost factors applied

to attrition were based mainly on involuntary separations and come from AFM 173-10. The possibility of a RIF and the associated cost is not considered. However, in any large scale force draw-down, RIF pay may become a factor that should be considered. In this module, attrition costs (ACOST) is computed by adding the increment ATCST.K for each guarter.

A ATCST.K = 
$$SUM(ATT.JK)*ACF.K$$
 (64)

L ACOST.K = ACOST.J + DT\*ATCST.J 
$$(64.1)$$

$$N \qquad ACOST = 0 \qquad (64.2)$$

where

ACOST = attrition costs

ATCST.K is the total number of pilots attrited from the pilot force, SUM(ATT.JK), times the attrition cost factor, ACF.K. The attrition cost factor is set to \$2,500, which is about equal to the average separation travel pay. This will be the cost allotted to any pilot attrition regardless of the actual reason.

Total cost, TOTCOST, is merely the sum of the six individual cost areas. It represents the total accumulated cost.

where

TOTCOST = total cost

The units of cost are based on constant FY 1978 dollars and are not adjusted for inflation.

The final area of the cost module computes a total cumulative cost discounted at a 10 percent annual rate. The discount factor, DFACT, is

computed as  $\exp(-0.025t)$ . The costs are summed each quarter as QTRCST. The discounted quarterly cost, DQTR, is then the product of the discount factor and the total quarterly cost. The discounted total cost, DCOST, is the discounted sum of all the quarter cost flows.

A DFACT.K = 
$$1/EXP(.025*TIME.K)$$
 (66)

where

DFACT - discount factor

N DCOST = 
$$0$$

where

DCOST = total cost discounted

This cost module will provide relative cost information to aid in the analysis of model behavior caused by different environmental and policy factors.

Model Equilibrium. During the initial investigation of system behavior, it is necessary to study the system in equilibrium. There are a number of reasons to study the model in equilibrium. The attainment of equilibrium provides some assurance that the general formulation of the computer model is consistent with the negative feedback structure of the conceptual model. It is important to start the model in equilibrium so that when the system is disturbed one can observe the exact response of the system to the particular perturbation. The same responses may be present under disequilibrium conditions but could be obscured by

confounding oscillations in the system. Also, the system costs in equilibrium provide a good basis for analysis of policy changes within the system. In equilibrium, the inherent stability (instability) of the system could easily be demonstrated and formulation problems in the system can be identified.

Equilibrium in the PP/AMM is represented by a state in which all force levels remain constant over time, the desired force levels are exactly met, and the accession rate for UPT would provide an input to equal a constant system attrition rate (the system output). In addition, all management goals would be met. These goals are explained in the model description. It should be reemphasized at this point that the baseline force set up in this model is hypothetical.

To initialize the model, consider the force needed to man the mission aircraft at the levels which will fulfill mission requirements. To compute this, the pilots in job levels three through five are set equal to the desired crew ratio times the number of aircraft for each level (Table II). Next, select any reasonable force size for the rated supplement. A reasonable rated supplement size is large enough to support the supplement requirements to support contingency planning needs, but never smaller than the minimum viable supplement size of 500. The number chosen for this hypothetical force is 3,425 pilots.

Also shown in Table II is the computational scheme for the initial size of the UPT instructor pilot force given the mission force and supplement sizes. The constant annual attrition rate of 8 percent is shown on the right. The annual production of accessions is shown on the left. These equations insure all management goals are met.

TABLE II
Initial Equilibrium Job Levels

Force Area	No. of Aircraft	Desired Crew Factor	JOBI	2/45*J0BI	
1	-	-	3,425	152.2	
2	-	<u>-</u>	*640	-	
3	3,500	1.25	4,375	194.4	
4	1,000	3.0	3,000	133.3	
5	900	4.0	3,600	160.0	
sum:			15,040	*640.0	

$$JOBI(2) \times TPINSI = \sum_{i=1}^{5} JOBI(i) \times (ANNUAL ATTRITION)$$
 (II-1)

JOBI(2) x 1.88 = 
$$\sum_{i=1}^{5}$$
 JOBI(i) x (.08) (II-2)

JOBI(2) x 1.80 = JOBI(1) x (.08) + 
$$\sum_{i=3}^{5}$$
 JOBI(i) x (.08) (II-3)

JOBI(2) = JOBI(1) x (2/45) + (2/45 x 
$$\Sigma$$
 JOBI(i)  
= \*640 (II-4)

where JOBI is the initial condition for the number in each job category and TPINSI is the desired student-to-UPT instructor rates.

<sup>\*</sup>The sum is equal to JOBI(2).

Now, the rest of the level equations in the model can be initialized. These equations are given in Table III. The quarterly attrition rate and average time in job constants are system goals. The average time in training for each category was derived from command training requirements and is a gross average for all training and aircraft in each category. It includes all the time rquired for travel, in-processing, local base level training, and other delays that exist in the system. The figures in the levels represent pilots, but the continuous nature of the systems dynamics methodology causes fractions to be computed.

Next, examine the equations in Table II. It is evident that in equilibrium any increase in the annual attrition rate will require a larger number of UPT instructor pilots, JOB(2), if the desired UPT student-to-instructor ratio, TPINSI, is maintained. From Eq (II-3), Table II, it can be seen that an increase in the desired value of TPINSI will decrease the number of instructors required (and vice versa).

Examination of Table III also leads to some relevant conclusions. The percentage of the total pilot force in the assignment window and training pipeline is quite large—over 21 percent. Thus, a significant part of this hypothetical pilot force is in the reassignment pipeline and represents a loss of useful manpower to the system. The relationships of all the variables are very evident when all others are held constant. However, very little intuition is required to see that when these variables and others in the system begin to vary simultaneously in different directions it is impossible to tell what outcomes will result. This is one of the main reasons to use the systems dynamics approach. Appendix B contains an example of the model run in equilibrium, followed by a complete listing of the model.

TABLE III

Initial Equilibrium Values

E ATT ATJC JOBI/ATJC *WIND ATUPGD *TRNG LEVELSUM	68.5 12 285.4 353.9 1.0 353.9 4,132.8	12.8 16 40.0 52.8 1.3 68.6 761.4	87.5 12 364.6 452.1 1.9 859.0 5,686.1	60.0 12 250.0 310.0 2.2 682.0 3,992.0	72.0 12 300.0 372.0 1.4 520.8 4,492.8	*1,540.8 *2,484.3 19,065.1	1	(1-111)	ATTRATE(CAT) (III-2)	JOBI(CAT)/ATJC(CAT) (III-3)	× IWIND(CAT) (III-4)	where JOBI is initial condition for each job category; ATTRATE is quarterly attrition rate goal; IWIND is initial condition for the number in the window each category; ATJC is average time in job constant each category; and ATUPGD is average time in training constant for each category.
ATT ATJC	12	91	12	12	12				JOBI(CAT) × ATTRATE(CAT)	ATT(CAT) + JOBI(CAT)/ATJC(CAT)	ATUPGD(CAT) × IWIND(CAT)	in for each job category; AT the number in the window e id ATUPGD is average time in e summed.
JOBI ATTRATE	3,425 .02	640 .02	4,375 .02	3,000	3,600 .02	*15,040	1	JOB(CAT) = JOBI(CAT)	ATT(CAT) = JOBI(CAT)	IWIND(CAT) = ATT(CAT) +	TRNG(CAT) = ATUPGD(CAT	where JOBI is initial condition IWIND is initial condition for t job constant each category; and *Denotes level quantities to be
Category	-	2	8	4	2	TOTAL		N J0	N AT	N IWIN	N TRN	where JOBI IWIND is i job consta *Denotes l

## Situational Analysis

Build-Up Analysis. There are four specific situations that have been simulated for analysis: force build-up, force draw-down; a combination resembling the Korean War to present, and increased force attrition. A force build-up scenario is simulated to compare with the change in force size requirement experienced in the 1965 to 1967 time frame. During that period, the Vietnam build-up increased pilot resource requirements by about 9,000. The simulation actually sets as a goal the doubling of the mission pilot force. This is allowed by increasing the imposed force ceiling by 10,975 and doubling the authorized flying hours. This assumes no large acquisitions of aircraft for a limited conflict. The pilot force is increased on this basis, and no other model parameters are changed. The decision to build-up is inserted between the fourth and fifth quarters of the simulation. See Appendix C for the model output of the simulation.

The number of pilots in rated supplement drops very rapidly as the need for more pilots begins. The number goes from 3,425 to 753 in the first year and down to 385 the next year; its minimum is 318 in the third year. The level of pilots in the rated supplement oscillates at about four and one-half year intervals twice and dampens to equilibrium 13 years after the initial perturbation. The supplement seems to fit its role very well. It does not build up again because of the limits imposed on the force ceiling and, in fact, it goes to the minimum viable level for the rated supplement (500).

The UPT instructor force reacts in the opposite direction from the rated supplement. Initially, it builds up in order to cope with the increased production requirements that are imposed. It attains a maximum

of 2,990 instructor pilots about 3 years after the new requirements are imposed; it then drops to its minimum viable level (400) in about 7 years and stabilizes at about 995 in 13 years after the build-up decision. The instructor force reacts consistently with our expectations. It increases to fill added needs and stabilizes to maintain the increased attrition implicit in the increased force level.

The three mission force levels all react in the same manner. They build quickly as the rated supplement is depleted to support the build-up. Then, their rate of growth decreases until the UPT instructor force is able to impact force growth. This takes two and one-half years. Then the mission force grows rapidly, overshoots its equilibrium value slightly, and finally reaches equilibrium about eight years after the initial build-up input. The final equilibrium values are listed in Table IV.

TABLE IV
Force Build-up Equilibrium Values

Final Level 456 995	Original Level 3,425 640
995	640
	040
8,743	4,375
5,995	3,000
7,194	3,600
23,383	15,040
30,040	19,065
	5,995 7,194 23,383

Since the force ceiling was raised by 10,975 pilots, the desired mission force levels are slightly greater than the equilibrium force levels.

This occurs because the mission force is allotted only a proportional share of the available pilot resources when there are not adequate pilot resources to fill all needs. In this case, the rated supplement is driven below the minimum viable level. This unfulfilled need causes the smaller percentages to be allotted to the mission job categories. Some mission capabilities are sacrificed in this situation. A corrective action would be to raise the force ceiling.

The plot of training levels seems to react as expected. A dip in the number in training occurs two or three quarters after the force build-up decision. This is the time when the rated supplement inputs play-out, and UPT input has not yet caught up. The cause of the UPT delay is more easily seen on the next plot.

The delay between the decision to recruit more UPT entrants and when the graduation rate catches up is about two years. UPT class sizes are budgeted two years in advance. The course is then one year long; therefore, the delay used here allows for a good deal of flexibility for graduating different quality pilots. If quality constraints are firm, then the budgeting process will have to become more flexible. The author assumes either of these techniques could be applied. The large fluctuation in the student-to-instructor ratio is a noteworthy characteristic of a sudden force requirement change.

The last plot shows the relationship of crew ratios to desired crew ratios. It takes five years for crew ratios to reach the desired levels. This indicates individual pilots would be flying much more than peace time goals. The maximum hours flown per pilot in a quarter is 80 (HFPP(CAT)). This is far from any imposed limit.

Table V gives the cost comparison for this change from equilibrium. The cost is given through the ten-year point and accounts only for the factors discussed in the cost module section. It is not conceivable this type of force change would last for ten years. After even one or two years, other major force structure changes would have to be made.

TABLE V

Cost of Force Build-up Scenario

Cost in	2 y	ears	5 ye	ears	10 years		
Millions	ТОТ	DCOST	тот	DCOST	тот	DCOST	
Equilibrium	2,096	1,998	10,482	8,262	20,964	13,272	
Build-up	2,096	1,998	12,261	9,443	30,199	18,161	
Added Cost	-	-	1,779	1,181	9,235	4,889	

Comparing costs in this scenario serves mainly to introduce the magnitudes under consideration. A feeling for the change in cost of pilot resources appears realistic based on current factors.

This simulation verifies succinctly the several modes of behavior exhibited by the model and the system. It shows the importance of the imposed force ceiling and demonstrates the behavior of the allocation logic in the model. Not only does the distribution of pilot resources work correctly, but the job categories all behave as system logic requires.

<u>Draw-Down Analysis</u>. The force draw-down scenario simulates a force reduction from 30,053 to 19,065. It represents a decision to reduce the total pilot force. This is accomplished by reducing the desired force size by 10,988 pilots and simultaneously reducing the number of aircraft by one-half. The total allotted flying hours are reduced by one-half to

adjust the flying hours to the number of aircraft and force size. The resulting force is comparable to the equilibrium force previously discussed.

The mission force is cut by one-half from equilibrium manning levels. The UPT instructor level is in equilibrium for the beginning force size. The rated supplement is near a minimum, as it would be at the end of a conflict period. The decision is made between the fourth and fifth quarters to reduce the force.

Appendix D presents the results of the simulation. The total force experiences about 12 percent per year attrition and in about 12 years reaches the desired level. The mission force drops to desired levels within a year and a-half with a slight undershoot initially, and the UPT instructor force drops to nearly a minimum viable level in the same period. The rated supplement builds rapidly as it is designed to do; however, as the mission force levels out, the rated supplement attrition begins to drop the total force level. The majority of the force reduction comes from the supplement after one to two years. This continues until the total force size is small enough to allow the desired force size in the supplement to increase to the equilibrium point. Note that at this time the UPT instructor force and rated supplement begin dampened oscillations with five-year periodicity into equilibrium. The UPT instructor force begins an upswing just less than two years after the rated supplement, which reflects the delays caused by budgetary planning policies in pilot production.

The system manages the reduction in force quite well. The rated supplement and UPT instructor force vary as they were designed to do in order to maintain the desired force levels. The oscillations in the

system levels are the result of information and training delays inherent in the system.

The next two plots in Appendix D show the changes in the numbers in the assignment window, training, recruiting, and UPT production levels. Initially, after the force draw-down decision, few pilots are trained in these categories; after about two years, the training rates again stabilize to maintain an experienced force. Flow rates into the rated supplement vary with the size of the supplement, as observed during real force draw-downs. The training rates for the UPT instructor pilot force change as needed to provide a force in equilibrium. Finally, desired crew ratios are established and maintained within two years.

The costs of the draw-down simulation are compared to a simulation of maintaining the original force in equilibrium. Figure 17 gives a simple representation of the total cumulative cost differences. Appendix E presents the results of the equilibrium simulation for this force before draw-down for a 25-year period.

The total cumulative cost of the draw-down scenario is higher than the cost of maintaining the original force in equilibrium until the 20-year point for total cost and beyond 25 years for total discounted cost. That is, no money is saved initially by reducing total force size; it is not an economy measure. The added training and attrition costs offset the savings in salary when the pilot force is cut back. One thing that biases this result is the fact that the cost module does not include retirement costs.

Historical Simulation Analysis. The third situation simulates the pilot force posture from 1957 to the present time. The force requirement and actual inventory are depicted graphically in Figure 18. The

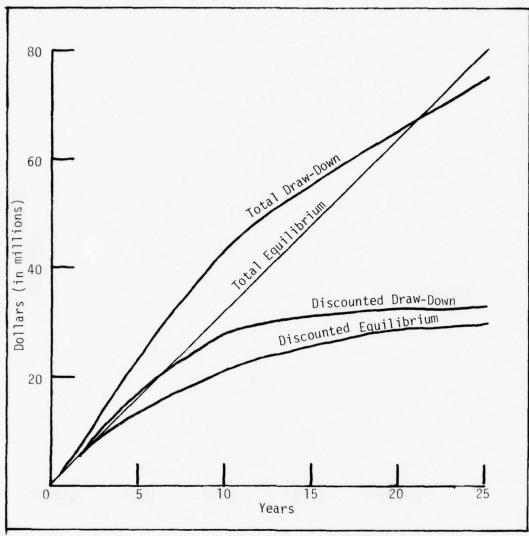
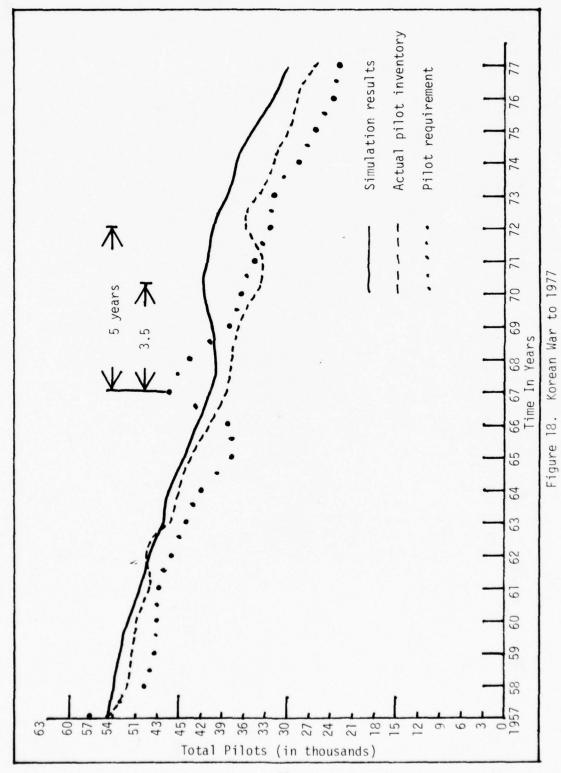


Figure 17. Equilibrium Draw-Down Cost Comparison



force requirement draws down through 1965, experiences the Vietnam build-up to 1967, and then draws down to its current level. The actual inventory generally lags by about one and one-half years and seems to react to the increased Vietnam force requirements with a five-year lag.

The simulation was accomplished by initializing the five job categories at 9,000, 1,155, 13,125, 9,000, and 10,800, respectively. This generates an initial total force of 54,747 which is near the actual 1957 level. This simulates a force beginning to draw-down. The desired force ceiling was approximately 57,300; and this is set into force ceiling as the model is initialized. The force ceiling, mission aircraft, and allotted flying hours are then changed proportionately to follow a force size profile near to the requirement shown in Figure 18. The simulation results are given in Appendix F.

The levels throughout the simulation react as described in the build-up and draw-down situations. Using this scenario, the ability of the model to simulate the historical system behavior can be tested. The actual pilot requirements and actual inventories are plotted with the simulation results in Figure 18. The model output follows the actual inventories very well. Initially it lags slightly behind, and as simulation time increases the lag becomes greater. The Vietnam build-up is seen earlier than the actual system variation. This is not surprising since decision-making and action time delays are often underestimated in modeling. Also, the level aggregation in the model tends to cause the natural periods of the model to be shorter than the actual system. The relative magnitude of the Vietnam build-up in the simulation is slightly larger than shown by the actual system. The significant point is that the model reacted properly. The actual magnitude of the change is not as

important. The usefulness of the PP/AMM model is more dependent on the proper mode of reaction than the specific magnitude of the reaction. The model is designed as a management tool for policy analysis and not as a tool for forecasting force sizes.

The model output in the appendix also demonstrates how the system maintains a fairly stable desired mission force. The rated supplement and UPT instructor force in the model respond as they have in the real system. Some difference between the model behavior and real world system behavior is to be expected, deriving from background "noise" in the real world system. The important fact is the model is not meant to predict the future but to represent the behavioral characteristics of the real system under a given policy structure.

Attrition Analysis. The fourth situation is actually a series of computer runs to show the effect of increasing attrition on the system. They are presented in Appendix G. The step increase makes the changes in the system more visible. The system reaction is the same in all cases with larger changes as the attrition rate increases. Each time the system equilibrates with all job categories, except the UPT instructors, increasing to maintain the desired total force size. The number in training, including UPT students, oscillates for about ten years.

A sudden change in the system, as presented here, is not likely; however, a possibility exists for this to happen if drastic policy changes occur. The costs are initially lower when attrition is increased, but they always become greater cumulatively after three to seven years if desired force levels are maintained. The initial savings is due to less salary cost when the force is below the desired level. However, a short fall in the mission force may be unacceptable even if it produces some savings.

Probably the most important point to notice from this situation is how the number of pilots in jobs decreases as attrition increases. That is, higher attrition rates force the system to put more pilots in the assignment window and in training to preserve equilibrium. Since the desired force size is maintained, less pilots are available to fill jobs (Figure 19). The number in the three mission categories is the same in each case since the model will fill the mission jobs whenever possible. The changes are in the rated supplement and UPT instructor force; the change in the total number of pilots available for jobs can be seen as the sum of the changes in these two job categories. As attrition increases one percent, the rated supplement is reduced by about six hundred pilots, and the UPT instructor force required is increased by about three hundred. The net loss to the job force is about three hundred pilots. The increased attrition has drawn pilots from the rated supplement to fill additional instructor positions, and more pilots are required to be in training at all times to fill additional job openings forced by the attrition.

## Policy Forecasting Analysis

Forecasting is actually highly subjective; it is based on skill, experience, and judgement. It is an attempt by a decision-maker to detect future events. No information about the future can be certain. The uncertainty associated with forecasted information implies the information may not be useful. In fact, forecasted information can influence a system negatively.

Usually, a forecast is accomplished by assuming the information about the behavior of the recent past is persistent. Trends or behavior

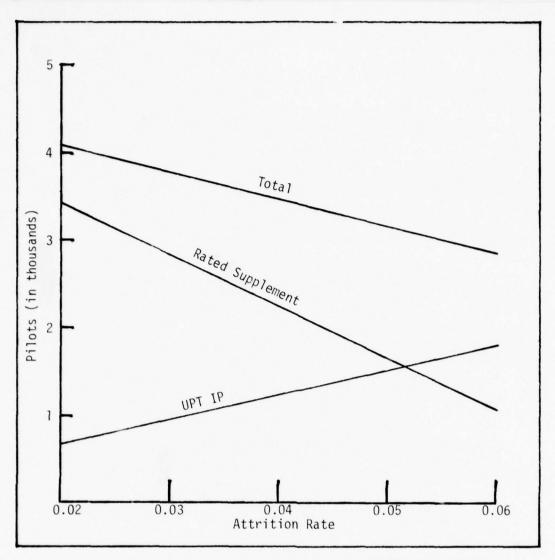


Figure 19. Attrition Rate vs UPT, IP, and Rated Supplement

found in this information are extrapolated into the future. The method used to forecast in the PP/AMM is described in Appendix L of J. W. Forrester's Industrial Dyanmics.

For this analysis, random noise was introduced into the equilibrium model in the attrition outflow. The attrition outflow is varied via a random, uniform distribution within the limits of  $\pm 10$  percent. In addition, the attrition rate was doubled at the 48-quarter point to introduce a perturbation for analysis.

Noise is the effect of random and unpredictable external factors on a system. It exists in all decision points in any system (Ref 3:108). The decision functions in the model have been simplified as a matter of modeling necessity. Factors with only a slight influence on variables that are part of the system and external factors independent of the real system have been left out. Noise simulates the addition of these factors. For a discussion of the NOISE function, see the DYNAMO User's Manual. The simulation results are presented in Appendix H.

The effect of noise on the model is minimal. It remains very stable and exhibits little change from previous runs without noise. The model reacts the same to the doubling of attrition with or without the effect of noise. For example, the magnitude of the change in total force varies less than 0.2 percent at the point of maximum difference. The periods within the system do not change nor do the relationships between any of the variables in the model. This indicates the pilot production allocation system is a very flexible and effectively managed system.

In order to provide an example of policy change and forecasting, information for projected attrition, PATT, is replaced by forecasted attrition, FATT. Then, forecasted attrition is used to determine

desired UPT class size, DCSIZE, and programmed minus actual force size, FORCE. The attrition in the last two quarters is used to forecast attrition forward four quarters from the present time.

The effect of the forecasted information is shown in Appendix I.

The model reacts to noise and doubled attrition approximately as before, and the equilibrium values are essentially the same. When attrition doubles, the number in total force drops and then rises past the desired level, then oscillates back into equilibrium. However, in the simulation using forecasted information, the total force drops to only about 90 percent, as low as previous simulations, and returns through the desired force level in three years (one year prior to the previous simulations). It overshoots the desired force level by more than five times the previous simulations, but then stabilizes with smaller deviations than noted earlier. The number of pilots in the core forces goes lower in the simulation using forecasted information while the supplement and the UPT instructor forces remain larger than before.

The system cost using forecasted information is higher primarily since more pilots are recruited and trained. Even the discounted cost at 25 years is \$100 million greater in the simulation with forecasted attrition.

Thus, forecasting information (with the technique used) does not seem to be worthwhile in this case. Increased costs, smaller numbers in the mission force, a greater overshoot of the desired total force level, and the uncertainty associated with forecasting overshadow the quicker reaction back to the desired total force level. Analysis of other types of forecasting techniques are beyond the scope of this thesis.

## IV. Conclusions and Recommendations

In this chapter, the model is summarized briefly and its usefulness as a management tool is described. The conclusions derived from the research are stated and, finally, some recommendations for further study are suggested.

## Model Summary

The PP/AMM maintains the pilot force so that the required primary mission forces are filled to the maximum extent possible. The rated supplement is to reduce any short-fall within the core forces as soon as possible. The supplement holds excess pilot resources when they are available, and, of course, a certain number of pilots are necessary in the supplement to fulfill the requirements for contingency planning. The UPT instructor force is maintained to provide the ability to replace pilot attrition and to provide new pilots for increased needs within the system. The system includes the pilots in these jobs and pilots in the assignment/training pipeline. In order to sustain such a complex system, a large number of pilots are always in the pipeline. The pipeline aggregates delays for processing, travel, training, and leave. The model represents the actual pilot production and allocation system of the Air Force.

## Model Usefulness

The PP/AMM shows the pilot production and allocation system to be a very well-managed resilient system under a wide variety of external influences. It equilibrates when the system is impacted by even large changes in attrition. Further, it behaves very well when impacted by

noise. The analysis shows the model's reaction to force build-up, draw-down, and increased attrition. The analysis demonstrates the model's ability to capture the essence of the system changes over a long span of time such as from the end of the Korean War to the present. Analysis of the model demonstrated an example of how it can be used as a management tool to evaluate the effect of policy changes within the actual system. The model will provide information for system managers at a very small cost. Probably the best argument for using this model as an aid to management analysis is the cost, in terms of dollars and time, of applying it. Managers can have results for two or three dollars of computer time and a few hours of work by an analyst. This cost is negligible when compared to the cost of training just one pilot (about five hundred thousand dollars).

#### Conclusions

The UPT student-to-instructor ratio is a very important factor in accomplishing system goals. The model is very sensitive to changes in this ratio, which suggests its importance in maintaining the systems stability. The rated supplement is effective in filling needs and accepting overflows. Also, the ability of the UPT instructor pilot to accept a four-fold range of student load enhances the stability of the system. This indicates UPT training plans must be kept flexible in the future. Ratios that are extreme should be a flag for management concern.

The importance of the rated supplement is demonstrated in this analysis. The number of pilots in the Air Force is decreasing to a point where the rated supplement is becoming depleted. The Korean War surplus is gone, and pilot attrition is increasing. Yet, a viable supplement is essential to support the mission of the Air Force. The

ability to react quickly to increased mission requirements is tied to the rated supplement. The time has come for system managers to carefully examine the policy options available for management of aggregate force levels.

The PP/AMM is useful to managers to evaluate the cost implications of proposed policy changes. It is no surprise that system costs are extremely high. The model demonstrated that any movement out of equilibrium increases system cost. The greatest cost of force reductions could be the reduced ability to perform the mission.

#### Recommendations

The first recommendation is to apply the PP/AMM to more specific problems of management interest. The author feels it will be useful as an aid in the formation of management policy in areas such as stabilizing the size of the UPT instructor force and desired UPT class size.

The final recommendation is that further research be performed to enhance the capability of the model. The PP/AMM should be modified to allow it to aid in the analysis of the absorbtion problem. In particular, content must be added to account for the force experience mix. The absorbtion problem is a very complex one that is impacted by the forecasted increasing attrition rates. This model, when updated, will be applicable to a study of management policy in this area.

## Bibliography

- 1. Albanese, R. Managing: Toward Accountability for Performance. Homewood, Illinois: Richard D. Irwin, Inc., 1978.
- 2. Davis, J. B., Colonel, USAF. Rated Distribution Training Management System: A Conceptual Study with Future Applications. Professional Study, M-32983-U, Air University, Maxwell Air Force Base, Alabama, 1976.
- 3. Forrester, J. W. <u>Industrial Dynamics</u>. Cambridge, Massachusetts: MIT Press, 1961.
- 4. Pugh, A. L. DYNAMO User's Manual. (5th Ed.) Cambridge, Massachusetts: MIT Press, 1977.
- 5. Forrester, J. W. <u>Principles of Systems</u>. Cambridge, Massachusetts: Wright-Allen Press, 1976.
- 6. Goodman, M. R. Study Notes in Systems Dynamics. Cambridge, Massachusetts: Wright-Allen Press, 1974.

APPENDIX A

DCRATIO (4) AND (5)

#### APPENDIX A

## DCRATIO (4) and (5)

DCRATIO (4) and (5) are presented in this appendix. The reasoning is the same as for DCRATIO (3) which is explained starting on page 35 of the text.

CRT4 represents bomber and tanker resources. Average crew ratios are 1.5, and there are two pilots per aircraft (1.5  $\times$  2 = 3).

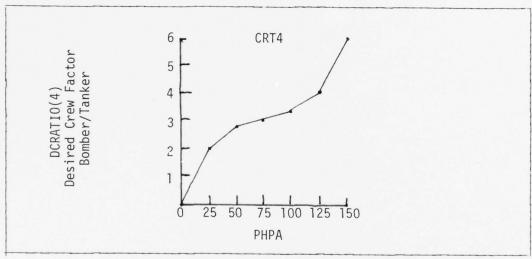


Figure 20. Crew Factor Diagram Bomber/Tanker

A DCRATIO.
$$K(4) = TABHL(CRT4, PHPA.K(4), 0, 150, 25)$$
 (67)

where

DCRATIO = desired crew ratio to fly programmed hours

CRT4 = crew table bombers

PHPA = programmed flying hours per aircraft

T 
$$CRT4 = 0/2/2.75/3/3.25/4/6$$
 (67.1)

where

CRT4 = crew table bombers

CRT5 represents transport resources. Average crew ratios are 2.0, and the two pilots per aircraft  $(2.0 \times 2.0 = 4.0)$ .

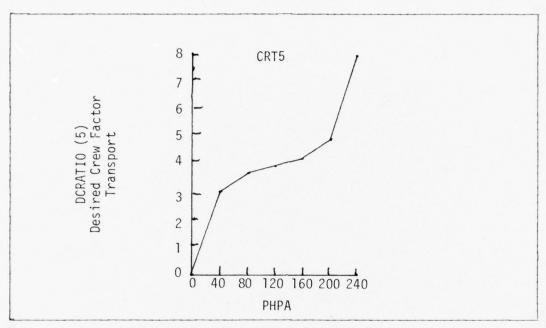


Figure 21. Crew Factor Diagram Transport

A DCRATIO.
$$K(5) = TABHL(CRT5, PHPA.K(5), 0, 240, 40)$$
 (68)

where

DCRATIO = desired crew ratio to fly programmed aircraft

CRT5 = crew table transports
PHPA = programmed flying hours

T 
$$CRT5 = 0/3/3.75/4/4.25/5/8$$
 (68.1)

where

CRT5 = crew table transports

APPENDIX B

NORMAL EQUILIBRIUM

AND

PROGRAM LISTING

## APPENDIX B

# Normal Equilibirum and Program Listing

The first part of this appendix prints the model output every fourth quarter. The variables are listed first and the scales are next at E.OO. If there were changes initiated when the computer run was made, they would be listed first; then a series of plots of the variables across time follows.

In this appendix, the entire model listing follows the computer run.

94SE 1	PILOT	בדבויר פגם	ON-ALL OC	ATION MA	NAGENENT	HODEL	
TIME	Joa	TRVS	NEED	DEOPCE	ATT	MIND	) [ 4= 02
		2 2	2		2	TPINS	TOTFOR
		3	3	2	7	CAP	FORER
			4	4		TONEED	23175
		5 5	ę.	5	•	FORCE	DOSEZE
	HEDO		PATT	CRAT IO	ITIFEC	ATJ	140152
		2 2	PRFC	2	,	2	2
		,	TRNGFO	3	•	3	3
			FOEFC	4 5	£	4	4
	SCOST	0003	TOEL	,	•	5	5
	PCOST	4002-	IPAV				
	TCOST	FOTTOS					
	UCOST	00051					
E-00	E-00	E-00	E-00	E - 00	E-00	E-00	E-00
	E-00	=-0:	E-00	E - CO	E-00	E-00	E-00
	E-00	5-00	E-00	E-00	5-00	E-00	E-00
	E-00	5-00	E-00	€-00	E-00	E-00	E-00
	E-00	5-00	E-00	€-00	E-30	E-12	=-00
	E-00	00	E-00	E-00	E-00	E-00	E-00
	E-00	E-1?	E-00	=-00	E-10	5-00	=-00
	5-00	5-17	E-03	E-00	5-30	5-00	= 03
	E-00	F-12	E-00	E-00	E-00	E-00	E-00
	5 35	5-1? 5 05	E-00	€-00	=-00	E-00	€ 03
	E 05	5 03	2-10				
	E 05	= 0=					
	E 05	E 05					
0.30	3425.0	757.72	0.	3425.0	59.700	1540.8	11515.
	540.00	59.5+2	52.800	540.00	12.300	1.8300	13755.
	4375.0	1 = 3. ==	452.08	4375.0	37.300	1.0000	15040.
	3000.0	582.00	310.00	3000.0	50.100	1185.9	1203.2
	3600.0	324.93	372.00	3600.0	72.000	0.00	1203.2
	0.	0.0000	1203.2	1.	0.	12.000	0.
	48.000	0.000	300.80	1.25 00	1.2530	16.000	210.00
	25.000	-14.55?	1.0000	3.0100	3.0000	12.000	753300.
	30.300	-14.557	7.0000	00(0	0100	12.000	133.00
	0.	0.00	1.0000			1	
	0.00	n.					
	0.	0.					
	0.0	0.					

PAGE	S SIFO.	בנוורנצב	TON-ALLO	NE INCITAC	MAZENENT	MODEL	
4.9	0 7425.0	151.27	С.	3425.0	13.700	1540.8	11515.
	540.0	54.54"	52.800	540.00	12.300	1.8800	13355 .
	4375.	379.35	452.08	4375.0	57.500	1.1000	15340 .
	3000.		310.00	3000.0	50.300	1135.9	1233.2
	3600.		372.00	3600.0	72.100	582.08	1203.2
	0		1203.2	G.	0.	12.000	0.
	o.		300.50	0.	ů.	16.300	0.
	48.10		211.12	1.25 (0	1.2500	12.000	211.00
	25.00			3.0000	3.0000	12.000	75010.
	30.00		7.0000	+.3360	2.0100	12.000	103.00
	453		1.0000				
	12.3						
	1325						
	232.						
3.3	3 3425.	757.37	0.	3425.0	53.500	1540.8	11315.
	240.0	58.540	52.800	540.00	12.300	1.2300	13055.
	+375.	9=9.35	452.08	-375.0	97.500	1.0000	150+0 .
	3000.	582.01	310.00	3000.0	50.000	1186.9	1203.2
	3600.		372.00	3500.0	72.330	814.91	1233.2
	0		1203.2	0.	0 •	12.000	0.
	ō		03.005	0.	0.	16.000	0.
	43.00		211.12	1.2500	1.2530	12.000	210.00
	25.00			3.0300	3.0000	12.000	75000.
				4.0000	4.0330	12.000	103.00
	30.00			4. 11 00	+.0336	12.000	103.00
	915		1.6000				
	24.5						
	2550						
	353.						
12.0			C •	3425.0	53.500	1540.8	11515.
	540.0		52.800	£40.00	12.900	1.8900	13355.
	+375.	359.93	452.08	+375.0	37.510	1.2000	150+0.
	3000.	392.00	310.00	3000.0	50.100	1195.9	1203.2
	3600.	529.37	372.00	3500.0	72.300	814.91	1203.2
	0	. 1.391	1203.2	J.	3.	12.000	0.
	0	-7 . 275	300.80	0.	n.	16.000	0.
	48.00	29.104	211.12	1.25 00	1.2500	12.000	210.00
	25.00			3.0100	3.0000	12.000	73000.
	30.00			+.00 00	0111	12.000	109.00
	1373			7.00 30	,		. 0 3 . 0 7
	35.9		1.0000				
	3975						
	848.						

94GE 3 P	T. 37 330	2:12							40351	
-465 2 P	ספס זכווי	335 10	ן מ-מנ	LUCA	1 1 2 1	N 74	M 7 9 5	4-N	MODEL	
16.00 34	25.0 35	7.32		0.	3425	.0	59.	500	1540.8	11515.
54	0.00 69	. 54 "	52.8	00	543	. 30	12.	300	1.8800	13155.
43	75.0 95	9.35	452.	63	-37	. 0	37.	500	1.0000	150+0.
		3.0°	310.	CO	300		50.	000	1186.9	1203.2
36		0.31	372.		360		72.	300	814.91	1233.2
		071+	1203			J.		0.	12.000	0.
		.320	300.			0.		0.	16.000	0.
		· 104	211.		1.25			2500	12.000	210.00
		.5=?	1.00		3.0			0000	12.000	75000.
		.5=?	7.00	1000	4.0	) (0	+ • 0	1100	12.300	103.00
		2.5	1.00	L 0						
		032. 335.								
		922.								
		927.				_				
20.00 34		3.32		0.	342	5 - 0		500	1540.8	11515.
		.5.1	52.8		240			330	1.8800	13055.
		3.35	452.		637			500	1.0000	15040.
		2.00	310.		300		-	300	1186.9	1203.2
35	00.0 52	0.43	372.		3500	0.0		000	931.32	1203.2
		071-	1203			0.		0.	12.000	0.
	0. 7	.275	330.	0 3		0 .		J.	16.000	0.
48	.000 29	.104	211.	12	1.25	5 00	1.3	500	12.000	210.00
25	.000 14	.552	1.00		3.0		7.0	1200	12.000	75000.
		.55?	7.00	00	4.31	000	4.0	2000	12.000	133.00
		9.21	1.00	CC						
		140.								
		432.								
14		?52.								
		3.32		0.	3429			500	1540.8	11515.
		.54.2	52.8		5+0 437			300	1.0000	19355.
		3.35	310.	-	300			500	1186.9	1203.2
		0.30	372.		350			300	814.91	1203.2
30		091	1203		,33	0.		0.	12.000	0.
		.390	300.			0.		o.	16.330	0.
48		.10:	211.	-	1.25		1.2	500	12.000	213.00
		.552	1.00		3.0			1220	12.000	75000.
30	.000 14	.557	7.00		4.3	000	4.0	0000	12.000	103.00
2	745. 3	7.9=	1.00	00						
7		948.								
7		573.								
15		47 3.								

PAGE 4	PILOT	080 0110 - 1	ON-ALLOC	AVAM NOITA	SEMENT	HODEL	
28.30	3+25.0	35 7.42	с.	3425.0	3.300	1540.3	11515.
	540.00	54.540	52.800	343.00 1	2.310	1.5500	13055 .
	4375.0	354.35	452.08	-375.0 9	7.300	1.0000	150+0.
	3000.0	582.31	310.00		0.200	1186.9	1203.2
	3500.0	523.90	372.00		2.100	814.91	1203.2
	0.	1.031	1203.2	0.	0.	12.000	0.
	٥.	7.278	300.80	ů.	0.	16.000	0.
	48.000	29.17-	211.12		. 2510	12.000	210.00
	25.000	14.5	1.0000		. 0000	12.000	75000.
	30.000	14.572	7.0000		.0000	12.000	
	3203.	109.43	1.0000	4.0330	. 0 10 0	12.000	103.00
	85.28	21056.	1.0000				
	9276.	14675.					
	1979.3	10570.					
	71.05.0	353.32					
32.00	3425.0	0.00	0.		8.500	1540.8	11515.
	640.00	58.54]	52.800		2.300	1.9800	13055.
	+375.0	858.95	452.08		7.500	1.0000	150+0.
	3000.0	332.03	310.00		0.700	1185.9	1203.2
	3600.0	520.30	372.00		2.000	931.32	1213.2
	0.	1.001	1203.2	0.	0.	12.000	0.
	0.	7.275	300.80	C•	0.	16.000	0.
	-8.000	29.11.	211.12		2300	12.000	210.00
	25.000	14.552	1.0000		. 0000	12.000	75000.
	30.000	14.55?	7.0000	4.0000 4	.0000	12.000	103.00
	3661.	125.17	1.0000				
	98.51	24154.					
	10601.	15 771.					
	2262.0	11552.					
36.00	3425.0	353.92	0.	3425.0	3.500	1540.8	11615.
	340.00	18.5+1	52.300		2.300	1.8300	13055.
	4375.0	378.35	452.08	4375.0 3	7.300	1.0300	150+0.
	3000.0	592.07	310.00		0.000	1186.9	1203.2
	3500.0	520.30	372.00	3600.0 7	2.000	814.91	1203.2
	0.	1.091-	1203.2	0.	0.	12.000	0 .
	0.	35.393	03.005	c.	0.	15.000	0 .
	48.000	29.10	211.12	1.25 00 1	. 2500	12.000	213.00
	25.000	14.552	1.0000	7.0000 7	. 0000	12.000	75000.
	30.000	14.5= 2	7.3000	4.0000 4	. 0000	12.000	103.00
	4113.	149.77	1.0000				
	110.34	27072.					
	11925.	18957.					
	2544.9	12460.					

PAGE	F	PILOT	ב בנית כ גם	ON-4LL CC	MCITA	MANASEMENT	MODEL	
40.0	10	3425.0	353.22	0.	3425 .	0 13.300	1540.8	11515.
		540.00	59.347	F2.800	643.0		1.3800	13055.
		+375.0	853.34	452.08	+375 .		1.0000	150+0
		3000.0	332.00	310.00	3000.		1195.9	1233.2
		3600.0	522.57	372.00	3600.			
							814.91	1203.2
		0.	1.0313	1203.2		. 0.	12.100	0.
		0.	7.275	300.80		. 0.	16.000	0.
		48.000	29.10.	211.12	1.25		12.000	210.00
		25.000	14.5=2	1.0000	3.010		12.000	75000.
	-	30.000	14.557	7.0000	4.000	0 0000	12.000	103.00
		4573.	155.42	1.0000				
		123.25	30030.			Market and the second s		
		13251.	2096.					
		2827.5	13272.					
	-							
44.0	10	3425.0	353.92	· .	3425 .	0 55.500	1540.8	11515.
77.0		540.00	63.5+1	52.850	5.0.0		1.8300	13035.
		4375.0	353.35	452.08	4375 .		1.0000	15340.
		3000.0	592.00	310.60	3000.		1185.9	1203.2
		3600.0	520.93	372.00	3500.	0 72.101	931.32	1203.2
		. 0 .	1.091-	1203.2	0	. 0.	12.000	0.
		0.	7.275	300.80	0		16.000	0.
		48.000	29.17	211.12	1.25 0	0 1.2530	12.000	217.00
		25.000	14.557	1.0000	3.300	0 3.0010	12.000	75030 .
		30.000	14.55?	7.0000	4.000		12.000	103.00
		5033.	172.05	1.0000				
		135.59	33039.	110000				
		14575.	23 05 0 .					
		3110.3	14337.					
		3110.3						
	-							
48.0	0	3425.0	333.32	0.	3425 .		1540.8	11515.
		640.00	38.5+?	52.800	547.0		1.9300	13055.
		4375.0	858.35	452.08	+375 ·		1.0000	130+0.
		3000.0	582.00	310.00	3000.	0 50.000	1186.9	1203.2
		3600.0	520.57	372.00	3500 .	0 72.000	814.91	1203.2
		0.	1.191-	1203.2	C	. 0.	12.000	0 •
		0.	36 . 393	300.80	0	. 0.	16.000	0.
		48.000	29.104	211.12	1.25 0		12.000	210.00
		25.000	14.552	1.0000	3.000		12.300	75030 .
		30.000	14.557	7.0000	4.000		12.000	103.00
		5491.	187.72	1.0000	1.000	4.4370	12.300	203.00
			35035.	1.0000				
		147.32						
		15901.	25157.					
		3333.0	14577.					
	-							

PAGE 6	PILOT	בינותנגב	ON-ALLOC	THEFERRAM HEITA	MOJEL
52.00	7425.0 540.00 4375.0 3600.0 0. 48.00 25.00 30.00 59.8. 160.24 17225.	787.17 38.34 378.35 382.30 582.30 582.30 582.30 1.331 7.277 14.357 14.357 14.357 14.357 14.357 14.357	2.300 452.68 310.00 772.00 1203.2 300.80 211.12 7.000 1.000	7425.0 :3.730 243.30 12.310 375.0 67.750 3900.0 50.320 3600.0 72.000 0. 0. 0. 0. 1.2500 1.2510 3.3100 3.3100 4.00000000	1540.8 11515. 1.5830 13355. 1.0000 15040. 1136.9 1203.2 614.91 1203.2 12.000 0. 12.000 210.00 12.000 75330. 12.000 103.00
55.00	3425.0 540.00 4375.0 3000.0 3600.0 0. 48.00 25.00 64.05. 172.57 13551. 3958.5	357.37 58.3.40 58.3.40 58.2.30 57.27 7.275 74.75	52.800 452.08 310.00 372.00 372.00 20.80 211.12 1.0000 7.0000	3425.0	1543.8 11515. 1.8800 13055. 1.0000 15040. 1186.9 1233.2 931.32 12033.2 12.300 0. 12.300 210.00 12.300 210.00 12.300 75030. 12.300 103.00
56.00	3427.0 540.00 4375.0 3000.0 3600.0 0. 48.000 25.000 30.000 5863. 134.30 19875. 4241.3	767.37 54.548 873.37 542.00 520.40 1.031' 35.77 23.17 14.57 274.57 45120 31345 16312	52.800 452.50 310.00 772.00 1203.2 300.00 211.12 1.0000 7.0000	7425.0 53.700 640.00 12.330 4375.0 57.530 7000.0 50.700 3530.3 72.330 0. 0. 0. 1.2500 1.2500 3.0330 7.0300 4.0300 4.0300	1540.8 11315. 1.8800 13055. 1.6000 150.0. 1126.9 1203.2 814.91 1203.2 12.000 0. 12.000 0. 12.000 75000. 12.000 75000.

PAGE 7 PILO	ר פוניסטטיד	ION-ALLOCATIO	N MANESERENT	MOTEL
54.00 3425.	353.37	C. 142	5.0 -3.500	1540.3 11515.
3+0.0		52.800 040		1.8300 19055.
+375.		452.08 437		1.0000 150.0.
3001.			3.3 50.330	1136.9 1203.2
3630.			0.0 /2.000	814.91 1203.2
3000		1203.2	C. 9.	12.000 0.
j		300.80	0. 1.	16.000 0.
48.00		211.12 1.2		12.000 210.00
25.00			200 3.0000	12.000 75000.
30.00				12.000 103.00
7321		1.0000	0.00 +. 5000	12.000 103.00
197.2		1.0000		
21231				
4524.				
4924.				
68.00 3425.		0. 342	5.0 55.300	1540.8 11:15.
540.0		52.800 6.0		1.8800 13055.
4375.		452.08 +37		1.0000 150+0.
3000.		310.00 303		1136.9 1213.2
3600.			0.0 72.000	931.32 1203.2
,530.		1203.2	0. 0 72.000	12.000 0.
o o		300.80	0. 0.	15.000 0.
48.00	-		5 00 1.25 10	12.000 210.00
25.00			100 3.0000	12.000 75300.
30.00				12.000 103.00
7773		1.0000	000 3900	12.000 133.00
209.5		1.0000		
225 25				
4806.				
72.00 3425.	357.32	0. 342	5.0 :3.500	1540.8 11315.
640.0		52.800 340		1.8000 13055.
4375.		452.08 437		1.0000 13040.
3600.		310.00 300		1196.9 1203.2
3600.			0.0 72.000	814.91 1233.2
0		1203.2	2. 3.	12.300 0.
0		300.80	0. 0.	16.100 0.
48.00		211.12 1.2		12.300 210.00
25.00		1.0000 3.3		12.000 75000.
30.00		7.0000		12.000 103.00
8235	-	1.0000		
221.8				
23852				
F089.	17525.			

PAGE	8 PILO	6500.13.	CH-ALLOC	CATION HANAGEMENT	MODEL
75.3	0 3425.0	157.42	€.	3425.0 55.500	1540.8 11515.
	540.00		52.800	3+J.00 12.300	1.8800 13055.
	4375.0		452.08	+375.0 27.500	1.0000 150+0.
	300 G. (		310.00	3030.0 50.000	1196.9 1203.2
	3600.0		372.00	3500.0 /2.000	314.91 1233.2
	3.	1.091-	1203.2	C. 0.	12.000 0.
	0.	7.27:	300.80	0. 0.	16.000 0.
	48.000	29.104	211.12	1.25 (0 1.2500	12.000 210.00
	25.000	14.557	1.0000	3.0000 3.0000	12.000 75000.
	30.000		7.0000	T.0000 +.0000	12.300 109.00
	8694	297.17	1.0000		
	234 . 21	57172.			
	25177	. 39971.			
	5372.3	17975.			
80.0	0 3425.0	157.37	0.	3425.0 53.500	1540.8 11615.
	640.00	38.547	52.800	549.00 12.300	1.8800 19055.
	4375.1	359.31	452.08	4375.0 27.500	1.0000 15040.
	3000.0	382.30	310.00	3000.0 50.000	1186.9 1203.2
	3500.0	520.9	372.00	3500.0 72.000	931.32 1203.2
	0.		1203.2	ů. 0.	12.000 0.
	C.	7.275	300.80	(. 0.	16.000 0.
	48.00		211.12	1.2500 1.2500	12.000 210.00
	25.00		1.0000	3.0000 3.0000	12.000 75000.
	30.30		7.0000	4.00000000	12.000 103.00
	9151		1.0000		
	246.5	5 0157.			
	265 02				
	5655.0	18155.			
84.0			ċ.	3425.0 53.500	1540.8 11315.
	640.00		52.800	540.00 12.300	1.8800 13355.
	+375.0		452.08	·375.0 37.300	1.0000 150+0.
	3000.1		310.00	3000.0 -0.000	1186.9 1203.2
	3600.0		372.00	3500.0 /2.000	814.91 1203.2
	0.		1203.2	(. 0.	12.000 0.
	0.		300.80	C. J.	16.000 0.
	48.000		211.12	1.2500 1.2500	12.000 213.00
	25 . 00 :		1.0000	3.000 3.000	12.000 75000.
	30.000		7.0000	4.0360 4.0100	12.000 103.00
	95 09		1.0000		
	258.33				
	278 27				
	5937.8	18+25.			

PAGE	9 PIL	ורווינגם ז	TON-ALLO	CATION MA	MASEMENT	MODEL	
88.0	3425	0 157.25		3425.0	33.300	1540.8	11515.
	5+0.0			640.00	12.300	1.5300	13055.
	4375	953.3	452.08	+375.0	37.500	1.0000	150+0.
	3000.	0 392.0	310.00	3000.0	50.000	1186.9	1203.2
	3600.	0 520.90	372.00	35 10 .0	72.000	314.91	1203.2
	0	. 1.991	1203.2	0.	0.	12.000	0.
		7.27	300.80	0.	0.	16.000	0.
	48.00	0 29.10	211.12	1.25 00	1.2510	12.000	210.00
	25.00	00 14.55		3.0000	3.0000	12.000	75000.
	30.00			4.0300	+.0000	12.000	103.00
	1006	. 344.1					
	271.1	8 56175.					
	29153	. +5120.					
	5220.						
92.3	0 3425.			3425.0	13.500	1540.8	11615.
	540.3			640.00	12.300	1.8800	19055.
	4375.			+375.0	37.500	1.0000	150+0.
	3000.			3300.0	50.000	1186.9	1203.2
	3500.			3500.0	72.330	931.32	1203.2
		1.091		0.	G.	12.000	0.
		7.272		0.	0.	16.000	0.
	48.00			1.25 00	1.2300	12.000	210.00
	25.00			3.0000	3.0000	12.000	75300.
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		35.38		0.	0.	16.000	0.
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PAGE 10 PILOT PROPURTION-ALLOCATION MANAGEMENT MODEL

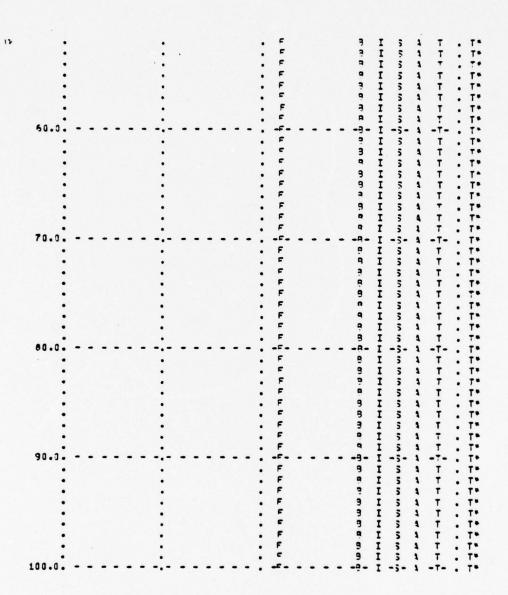
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PAGE 11 PILOT PROMUSTION-ALLOCATION MANAGEMENT MODEL

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PAGE 12 PILDE PRODUCTENDALLOCATION MANAGERICH MODEL
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PAGE 13 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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PAGE 14 PILOT PROMISSION-ALLOCATION MANAGEMENT MODEL

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PAGE 15 PILOT PROPUSCION-ALLOCATION MANAGEMENT MODEL

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•	•	•	1	3	5 12,34,56
•	•	•	1	3	5 12,34,50
	•	•	1	3	5 12,34,55
		•	1	3	5 12,34,56
			1	3	5 12,34,56
			1	3	3 12,34,55
			1	*	5 12,34,56
			1	*	5 12,34,56
			1	3	5 12,34,56
40.0.	 		-1		 - 5 12,34,56
			i	3	5 12,14,50
		700	i	•	5 12,3+,50
91.7000			i		5 12, 14,56
			1		
				•	
			1	3	3 12,34,55
•	•	•	1	3	5 12,34,56
	•	•	1	3	5 12,34,50
	•	•	1		5 12,34,56
	•		1	•	5 12,34,50
50.3.	 ,		-1	1	 - 5 12,34,50
			1	3	5 12,34,55
			1	3	5 12, 14,56
			1	•	5 12,34,56
			1	•	5 12.34.50

		. 1	•	3 12, 14,5
		. 1	*	5 12,34,5
			•	
				5 12,34,5
		• 1	3	5 12,34,5
		. 1	3	5 12, 14,5
60.0	-,	1	-3	5 12,34,51
		. 1	3	5 12,34,51
				5 12,34,5
			•	
스타고 하게 하는 그리고 그는		•	-	5 12, 1-,51
		•	3	5 12,34,51
		. 1		5 12,34,51
	•	. 1	3	5 12,34,5
	•		3	5 12,34,50
			1	5 12,34,56
			•	
70.0			•	5 12, 34,51
			-3	5 12,34,56
	•	. 1		5 12,34,56
	•		•	5 12, 74,56
	•	. 1	3	5 12, 34,56
• 10 mm 1		. 1	1	3 12,3+,56
			7	5 12,34,56
			3	2 12,34,90
			•	5 12,3.,56
			3	5 12,34,56
	•	• 1	3	5 12,34,56
	•	. 1	3	5 12, 34,56
60.0	-,	1	-3	5 12, 14,56
		. 1	3	5 12,34,56
		. 1	•	5 12, 14,56
				5 12.34.56
		•	2	
	•	•	3	5 12,34,56
		. 1	3	\$ 12,34,56
•	•	. 1	3	\$ 12, 14,56
•	•	. 1	3	5 12,34,5€
		. 1	3	5 12, 14,56
			3	\$ 12,34,56
90.0			- <del>-</del>	7 12,34,56
				3 12,34,56
	•	• •	3	5 12,34,56
	•	. 1	3	5 12,34,56
		. 1	3	5 12,34,56
		. 1	3	5 12,34,56
	•	. 1	3	5 12,34,55
			•	5 12,34,56
			•	
				5 12,34,56
			3	5 12,34,56
		• 1	3	5 12, 14,56
100.0	-,	!	-3	5 12,34,56

```
PLF,CM77777,T70.T79380,FEKKE,4014
ATTACH,OYNAMO,DYNJCL,ID=AFIT.
BEGIN,DYNAMO,DYNAHO,CM=77777.
                                                                                                           000
                                                                                                           000
                                                                                                           000
      PILOT PRODUCTION-ALLCCATION MANAGEMENT MODEL
                                                                                                           000
MOTE
                                                                                                           300
NOTE
                                                                                                           000
NOTE . . . . ARRAY INITIALIZATION . . . .
                                                                                                           000
NOTE
                                                                                                           0 3 0
NOTE
                                                                                                           000
  TOATES
                                                                                                           333
             TCAT
                         - CATEGORIES OF PILOT JOBS
                                                                                                           000
FOR CAT=1,TCAT
                                                                                                           030
              CAT
                         - CATEGORY ITERATION INDEX
                                                                                                           000
FOR PIL=2,TCAT
              PIL
                          - INTEX FOR FLYING JOBS
                                                                                                           000:
FOR MPIL=3,TC4T
                                                                                                          000:
              MPIL
                         - INDEX FOR NON-INSTRUCTOR FLYING JOBS
                                                                                                           000:
NOTE
                                                                                                           000:
NOTE
                                                                                                           010:
NOTE . . . FORCE STRUCTURE BY FILOT TYPE . . . .
                                                                                                           000
NOTE
                                                                                                           000:
NOTE
                                                                                                           000
      HIND.K=HIND.J+7T*
                                                                                                          000:
         (SUM(TONING. JK) +UPT.JK-SUM(TOTRNG.JK))
                                                                                                           000
              TOWNO - ASSIGNMENT RATE FROM PILOT CATEGORY
                                                                                                          000:
                                                                                                           000:
              UPT - MISSION PILOT STADUATES
TOTRIG - ASSIGNMENT RATE TO W/S TRAINING
                                                                                                          000:
                                                                                                          000:
     (CNIWI) HUZ=ONIW
                                                                                                          000:
                       - PILOTS IN REALLOCATION PROCESS
- PILOTS IN JOB FOR REASSIGNMENT
              CHIM
                                                                                                          0004
              ININO
                                                                                                          0004
     IHIND(CAT) = ATT (CAT) +JOBI (CAT) / ATJC (CAT)
                                                                                                           0004
              IMINO - PILOTS IN JOB FOR REASSIGNMENT
CAT - CATEGORY ITERATION INDEX
ATT - PILOT ATTRITION RATE BY CATEGORY
JOBI - INITIAL FORCE SIZE BY CATEGORY
                                                                                                          0004
                                                                                                           000-
                                                                                                          0004
                                                                                                          0004
                         - AVERAGE TIME IN JOB BY CATEGORY
              AT JC
                                                                                                          0004
     TRNG.K(CAT)=TRNG.J(CAT)+DT+
(TOTRNG.JK(CAT)-TOJOB.JK(CAT))
                                                                                                          0004
                                                                                                          0004
              TRNG - PILOTS IN M/S TRAINING
CAT - CATEGORY ITERATION INDEX
                                                                                                          0005
                                                                                                          0005
              TOTRIG - ASSIGNMENT RATE TO W/S TRAINING OCLOT
                                                                                                          0005
                                                                                                          0 0 0 5
     TRAG(CAT) = ATU > GD(C3 T) * IWIND (CAT)
                                                                                                          0005
     TRNS - PILOTS IN W/S TRAINING

CAT - CATEGORY ITERATION INDEX

ATUPGO - AVO TIME IN UPGRADE/REASSIGNMENT PIPE_INE

IMINO - PILOTS IN JOB FOR REASSIGNMENT

JOB.K (CAT) = JOB. J (CAT) + DT*
                                                                                                          0005
                                                                                                          2005
                                                                                                          0005
                                                                                                          0005
                                                                                                          0005
         (TOJOS.JK(CAT)-TOWING.JK(CAT)-ATT.JK(CAT))
                                                                                                          0006
              DOS - PILOTS IN EACH GATEGORY

CAT - CATEGORY ITERATION INDEX

TOJOS - ASSIGNMENT RATE TO JOS

TOWNO - ASSIGNMENT RATE FROM PILOT CATEGORY
                                                                                                          0006
                                                                                                           0006
                                                                                                          0006
                                                                                                          0006
               ATT
                         - PILOT ATTRITION RATE BY CATEGORY
                                                                                                          0106
      JOS (CAT) =JOST (CAT)
                                                                                                          0006
                        - PILOTS IN EACH CATEGORY
               J09
                                                                                                          0006
     GAT - CATEGORY ITERATION INDEX

JOSI - INTTIAL FORCE SIZE BY CATEGORY

ATT.KL(CAT) = JOT.K(CAT) = ATTRATE (CAT)

*(ATTAGL, K(CAT) / TATTRATE (CAT) + TEST4.K(CAT)
                                                                                                          3006
                                                                                                          0005
                                                                                                          0007
                                                                                                          0307
              ATT
                        - PILOT ATTRITION RATE BY CATEGORY
                                                                                                          0007
```

```
- CATEGORY ITERATION INJEX
               JOR - PLOTS IN EACH CATEGORY
ATTRATE - PROGRAMMED ATTRITION RATE BY CATEGORY
                                                                                                            00
                                                                                                            00
              ATTADU - ATTRITION ADJUSTMENT FACTOR
ATADUM - ATTRITION RATE ADJUSTMENT TIME BY CATEGORY
TEST4 - TEST ON ATTRITION RATE
                                                                                                            0.0
                                                                                                            001
                                                                                                            001
     ALT (CAT) = JOB (CAT) *1 TTRATE (CAT)
                                                                                                            001
               ATT - PIL OT ATTRITION PATE BY CATEGORY
                                                                                                            00:
                          - CATEGORY ITERATION INDEX
               CAT
                                                                                                            001
                          - PILOTS IN EACH CATEGORY
               109
                                                                                                            001
     ATTRATE - PROGRAMMED ATTRITION RATE BY CATEGORY TOWNED.KL(CAT) = (JOP.K(CAT) + JOP.K(CAT)) /
                                                                                                            001
                                                                                                            000
         (OFORGE.K(CAT) *ATJ.K(CAT))
                                                                                                            001
               TOHIND - ASSIGNMENT RATE FROM PILOT CATEGORY
CAT - CATEGORY ITERATION INDEX
JOB - PILOTS IN EACH CATEGORY
                                                                                                            000
                                                                                                            000
                                                                                                            000
               DEORGE - DESTRED FORCE SIZE BY MISSION ATJ - AND TIME IN JOB
                                                                                                            000
                                                                                                            000
     AT J.K(1) =4 TJC(1) * (SUMV(JOP.K,2,TCAT)/)THFOR.K)
                                                                                                            000
         *TEST11.K(1) - AVR TIME IN JOS
                                                                                                            nnn
                                                                                                            000
                        - AVERAGE TIME IN JCR RY CATEGORY
- PILOTS IN EACH CATEGORY
- CATEGORIES OF PILOT JORS
                                                                                                            000
               109
                                                                                                            000
               TCAT
                                                                                                            000
               DTMFOR - DESIRED TOTAL MISSION FORCE
TEST11 - TEST ON AVE TIME IN FLYING CATEGORY
                                                                                                            000
                                                                                                            000
      ATJ. Y (PIL) =ATJC (PIL) *TEST11.K (PIL)
                                                                                                            000
               ATJ - 4V3 TIME IN JOB
PIL - INTEX FOR FLYING JOBS
                                                                                                            001
                                                                                                            001
               ATJO - AVERAGE TIME IN JOR BY CATEGORY
TEST 11 - TEST ON AVE TIME IN FLYING CATEGORY
                                                                                                            001
                                                                                                            201
     TOJOB.KL (CAT) = TONG.K (CAT) *TEST12.K (CAT) /
(ATUPED(CAT) + ATUTIME (CAT))
                                                                                                            001
                                                                                                            001
              TOJOB - ASSIGNMENT PATE TO JOB
CAT - CATEGORY ITERATION INDEX
                                                                                                            001
               CAT - CATEGORY ITERATION INCOME.
TRNS - PILOTS IN W/S TRAINING
                                                                                                            001
                                                                                                            001
               TEST12 - TEST ON ASSIGNMENT PATE TO PILOT CATEGORY ATUPGO - AVS TIME IN UPGRADE/REASSIGNMENT PIPFLINE ATUTIME - AVG TIME TO ADJUST PILOT FORCE
                                                                                                           001
                                                                                                            001:
                                                                                                            0 01:
NOTE
                                                                                                            0011
NOTE
                                                                                                            0 0 1 1
NOTE * * * ASSI; NMENT/REASSIGNMENT CONTROL * * *
                                                                                                            0011
NOTE
                                                                                                            0011
NOTE
                                                                                                            0011
      NEED.K(1)=MAX(0,SUPN.K)
                                                                                                            0011
     NEED - PERSONNEL REQUIREMENT IN THE RATED SUPPLEMENT SUPN - CRITICAL FATED SUPPLEMENT NEED. K(2) + 4 ST)), 0)
                                                                                                            0011
                                                                                                            0011
                                                                                                            0012
              NEED - INSTRUCTOR REQUIREMENTS
INP - PROJECTED INSTRUCTOR PILOT MEEDS
ATT - PILOT ATTRITION RATE BY CATEGORY
                                                                                                            0012
                                                                                                            0012
                                                                                                            0012
                          - SMOOTHING TIMES
               ST
                                                                                                            0012
      NEED.K(MPIL) = MAX((OFOFCE.K(MPIL) - JOS. <(MPIL)
                                                                                                            0012
         NEED - PILOT REQUIREMENTS BY DATEGORY
                                                                                                            0012
                                                                                                            0012
                           - INTEX FOR NON-INSTRUCTOR FLYING JOBS
               MPIL
                                                                                                            0012
               DEORGE - DESIRED FORCE SIZE BY MISSION
              JOS - PILOTS IN EACH CATEGORY
TOWIND - ASSIGNMENT RATE FROM PILOT CATEGORY
ATT - PILOT ATTRITION RATE BY CATEGORY
                                                                                                            0012
                                                                                                            0013
                                                                                                            0013
                                                                                                            0013
               ST
                          - SMOOTHING TIMES
                                                                                                            0013
      SUPN. K=SSS-J03. K(1)
                                                                                                            0013
              SUPN - CRITICAL RATED SUPPLEMENT
SSS - VISSLITY LEVEL FOR RATED SUPPLEMENT
JOB - PILOTS IN EACH CATEGORY
                                                                                                            0013
                                                                                                           0013
                                                                                                            0013
      TONEED.K=MAY(1, SUM(NEED.K))
                                                                                                           0013
```

```
TONEED - TOTAL REQUIRED PERSONNEL FOR ASSIGNMENT FILLS
                                                                                                    001
13
                            - PERSONNEL REQUIREMENT IN THE RATED SUPPLEMENT
                  NEED
                                                                                                    001
          INVSUP.K=4IND.K-PINVOIS.K
                                                                                                    001
                  INVSUP - PILOTS AVAILABLE FOR RATED SUP
WIND - PILOTS IN REALLOCATION PROCESS
PINVSUS - ASSIGNMENTS TO FLYING JOBS
                                                                                                    001
                                                                                                    001
                                                                                                    001
          INDISC . K (CAT) = (NEET . K (CAT) / TONEED . K) + HIND . K
                                                                                                    001
                  INDISC - PROJECTED ASSIGNMENTS TO JOYS CAT - CATEGORY ITERATION INTEX
                                                                                                    001
                                                                                                    001
                  NEED - PERSONNEL REQUIREMENT IN THE RATED SUPPLEMENT
TONEED - TOTAL REQUIRED PERSONNEL FOR ASSIGNMENT FILLS
WIND - PILOTS IN REALLOCATION PROCESS
                                                                                                    001.
                                                                                                    0 (1)
                                                                                                    001
          PINVOIS. K=SUMV (NEET . K, 2, TCAT)
                                                                                                    001!
                  PINVDIS - ASSIGNMENTS TO FLYING JOBS
NEED - PEPSONNEL REQUIREMENT IN THE RATED SUPPLEMENT
                                                                                                    001!
                                                                                                    0 0 1 !
                            - CATEGORIES OF PILOT JORS
                  TCAT
                                                                                                    001!
          TOTRIG.KL(1)=>LIP(INVSUP.K, INDISC.K(1), WIND.K, TONEED.<)
TOTRIG - ASSIGNMENT RATE TO W/S TRAINING
INVSUP - PILOTS AVAILABLE FOR PATED SUP
                                                                                                    0015
                                                                                                    001
                                                                                                    0015
                  INDISC - PROJECTED ASSIGNMENTS TO JORS
                                                                                                    0015
                            - PILOTS IN REALLOCATION PROCESS
                  CHIK
                                                                                                    0014
                  TONEED - TOTAL REQUIRED PERSONNEL FOR ASSIGNMENT FILLS
                                                                                                    0016
          TOTRNG.KL(PIL) =CLIP(NEED.K(PIL), INDISC.K(PIL), WIND.K,
                                                                                                    0016
             TONEED . ()
                                                                                                    0616
                            - ASSIGNMENT RATE TO W/S TRAINING
                  TOTZNE
                                                                                                    0016
                            - INDEX FOR FLYING JOBS - PERSONNEL REQUIREMENT IN THE RATED SUPPLEMENT
                  PIL
                                                                                                    0011
                  NEFT
                                                                                                    0016
                  INDISC - PROJECTED ASSIGNMENTS TO JORS
                                                                                                    0 G 1 t
                            - PILOTS IN REALLOCATION PROCESS
                  CHIM
                                                                                                    0016
                   TONEED - TOTAL REQUIRED PERSONNEL FOR ASSIGNMENT FILLS
                                                                                                    0016
          INP.K=DFORCE.((2)-108.K(2)+TONIND.JK(2)
                                                                                                    OCIE
                  INP
                            - PROJECTED INSTRUCTOR PILOT NEEDS
                                                                                                    0017
                  OFORCE - OFFIRED FORCE SIZE BY MISSION
                                                                                                    0017
                             - PILOTS IN EACH CATEGORY
                   109
                                                                                                    0017
                  TOWING - ASSIGNMENT RATE FROM PILOT CATEGORY
                                                                                                    0017
     NOTE
                                                                                                    0017
     NOTE
                                                                                                    0017
     NOTE * * * PILOT PRODUCTION PIPELINE * * *
                                                                                                    0017
     NOTE
                                                                                                    0017
                                                                                                    0017
     NOTE
          UPT.KL=DELAYT( PREC. JK, TOEL . K)
                                                                                                    0017
                  UPT
                           - MISSIGN PILOT GRADUATES
                                                                                                    0018
                            - PIL OT CANDIDATE RECRUITING PATE
                  PRED
                                                                                                    0018
          TOE_ - 4V: TIME THROUGH UPT PIPELINE
PREC.KL= (3SI7F.K/4) *MREC.K
                                                                                                    0618
                                                                                                    0016
                  PRES
                            - PILOT CANDIDATE RECPUITING PATE
                                                                                                    0018
                          - ANNUAL UPT CLASS SIZE
- RECRUITING CAPACITY
                  CSIZE
                                                                                                    0016
                   HRES
                                                                                                    3018
          MREC.K=TABLE(FREC, 2SI7E.K/4,0,1400,200)

MRED - REPRUITING CAPACITY

CSIZE - ANNUAL UPT CLASS SIZE

TRED - CLASS SIZE ADJUST FACIOR FOR UPT RECRJIFING

TREC=1/1/1/1/1/.3F/.89/.82
                                                                                                    0016
                                                                                                    0015
                                                                                                    0018
                                                                                                    0019
                                                                                                    0019
          TRED - CLASS SIZE ADJUST FACTOR FOR UPT RECRIFTING CSIZE.K=JDB.K(2) FTOINS.K
                                                                                                    2013
                                                                                                    0019
                           - ANNUAL UPT CLASS SIZE
                   CSIZE
                                                                                                    0019
                             - PILOTS IN EACH CATEGORY
                   JO 9
                                                                                                    0019
                   TPINS
                             - UPT STUDENT/INSTRUCTOR RATIO
                                                                                                    0019
           TPINS.K=TABHL(TTPIR,TT.K,5,1.75,.25)
TPINS - UPT STUDENT/INSTRUCTOR RATIO
                                                                                                    0019
                                                                                                    3019
                             - STIDENT INSTRUCTOR RATIO
                   TTPIR
                                                                                                    0014
                            - CLISS SIZE ADJUSTMENT FACTOR
                                                                                                    0020
           ISINS=TPINSI
                                                                                                    0020
                  TPINS - UPT STUDENT/INSTRUCTOR PATIO
TPINSI - DEFIRED STUDENT/INSTRUCTOR FATIO
                                                                                                    0020
                                                                                                    0020
           TTPIR=0/.47/.14/1. 1/1.88/2.35/3.15/4.0
                                                                                                    0023
```

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TIMEN - STORENT TURINGTON MAILO
                                                                                       UL
    TT.K=OCSIZE.K'SMOOTH(CSIZE.K,TST)
TT - GL'SS SIZE ADJUSTMENT FACTOR
                                                                                       0 6:
                                                                                       00:
                    - DESTRED UPT CLASS SIZE
            DOSIZE
                                                                                       00:
            CSIZE - ANNHAL UPT CLASS SIZE
ST - SMOOTHING TIMES
                                                                                       00:
                                                                                       00:
    TOEL. K=CAS. K*OFL
                                                                                       aa:
            TOF
                  - AV? TIME THROUGH UPT PIPELINE
                                                                                       00:
                  - CAPACITY FACTOR FOR UPT TRAINING DELAY
            CAP
                                                                                       00:
                     - INTTIAL AVERAGE TIME IN JPT PIPELINE
            DEL
                                                                                       002
    CAP.K=TAGHL (CAPT, CRIZE.K, 0,6000, 1000)

CAP - GAPACITY FACTOR FOR UPT TRAINING DELAY
                                                                                       002
                                                                                       002
            CAPT
                     - CAPACITY UTILIZATION FACTOR UPT TRAINING DELAY
                                                                                       002
                     - ANNUAL UPT CLASS SIZE
            CSIZE
                                                                                       002
    CAPT=.8/1/1/1.1/1.7/1.25/1.3
                                                                                       002
           CAPT
                    - CAPACITY UTILIZATION FACTOR UPT TRAINING DELAY
                                                                                       002
    PUPT.K=OLINET( PREC.JK, PTOEL.K)
PUPT - PROJECTED UPT GRADUATES
PREC - PILOT CANCIDATE RECRUITING PATE
                                                                                       002
                                                                                       002
                                                                                       002
            PTOEL
                     - PERCEIVED TRAINING DELAY
                                                                                       002
     PTOEL . K = SHOOT+ (TOEL . K, ST)
                                                                                       002
            PTOEL
                    - PERCEIVED TRAINING DELAY
                                                                                       002
                     - AV; TIME THROUGH UPT PIPELINE
            TOEL
                                                                                       002
            ST
                     - SYDOTHING TIMES
     DOSIZE.K =44 Y (FORCE. K +PATT.K, V9L.K)
                                                                                       002
            OCSIZE - DESTRED UFT CLASS SIZE
FORCE - PROGRAMMED FORCE SIZE MINUS ACTUAL FORCE SIZE
                                                                                       002
                                                                                       002
                     - PROJECTED ANNUAL ATTRITION
            PATT
                                                                                       002
            VBL
                     - CLASS SIZE FOR VIABLE UPT OPERATION
                                                                                       002
    V9L.K=VBLC+TSST8.K
                                                                                       002
            VBL
                   - CLASS SIZE FOR VIABLE UPT OPERATION - STRIMUN VIABLE UPT CLASS SIZE
                                                                                       002
                                                                                       002
                     - TEST ON VIABLE UPT CLOSS SITE
            TE STS
                                                                                       002
NOTE
                                                                                       200
                                                                                       002
NOTE
NOTE . . . . FORC: SIZE POLICY . . . .
                                                                                       0021
NOTE
                                                                                       0024
NOTE
                                                                                       0024
    PLANES.K (1) =0
                                                                                       0024
            PLANES - ACTIVE AIFCRAFT BY MISSION
                                                                                       0024
    PLANES.K (2) =0
                                                                                       0024
            PLANES - ACTIVE AIRCRAFT BY MISSION
                                                                                       0024
    PLANES. K (MOIL) = OOL 1 CFT. K (MPIL) *TEST2. K (MPIL)
                                                                                       0024
            PLANES - ACTIVE AIRCRAFT BY MISSION
HPIL - INDEX FOR NON-INSTRUCTOR FLYING JOBS
                                                                                       0024
                                                                                       0024
            POLACET - ACTIVE AIRCRAFT BY CATEGORY
TESTS - TEST ON NUMBER OF AIRCRAFT
                                                                                       0025
                                                                                       0025
     4HOURS . K (1) = 0
                                                                                       0025
           AHOURS - AUTHORIZED MISSION FLYING HOURS
                                                                                       0025
     AHOURS.K (2) = 0

AHOURS - AUTHORIZED MISSION FLYING HOURS
                                                                                       0025
                                                                                       0025
     AHOURS.K (MPIL) = OOL 4RS APP.K (MPIL) * TEST1.K (MPIL)
            AHOURS - AUTHORIZED MISSION FLYING HOURS
                                                                                       0025
                     - INTEX FOR NON-INSTRUCTOR FLYING JOSS
            MP IL
                                                                                       0025
                    - TOTAL PROGRAMMED FLYING 40UPS
                                                                                       0025
          POL HRS
                    - FLYING HOURS APPORTIONING FACTOR
- TEST ON AUTHORIZED HOURS
            APP
                                                                                       0026
            TEST1
                                                                                       2026
     4P0.K(1) =0
                                                                                       0025
            APP
                     - FLYING HOURS APPORTIONING FACTOR
                                                                                       0026
     APP.K(2) =0
                                                                                       0026
            400
                     - FLYING HOURS APPORTIONING FACTOR
                                                                                       0026
     APP. ( MPIL) = TESYRS. Y (MPIL) /TOHRS. Y
                                                                                       0026
            APP - FLYING HOURS APPORTIONING FACTOR
            TOTAL DESIRED FLYING HOURS

- TOTAL DESIRED FLYING FLYING HOURS

- TOTAL DESIRED FLYING FLYING HOURS
                                                                                       0026
                                                                                       0025
                                                                                       0026
                                                                                       0027
```

```
0: SHRS.K (1) =?
                                                                                                                                                         402
              DESHRS - DESIRED FLYING HOURS PER A/C FOR PROFICIENCY
                                                                                                                                                         302
 DESHRS. x (2) =0
                                                                                                                                                         002
              DESHRS - DESTRED FLYING HOURS PER A/C FOR PROFIDIENCY
                                                                                                                                                         002
 DESHRS.K(MPIL) = DM.Y(MPIL) * PLANES.K(MPIL)

DESHRS - DESTRED FLYING HOURS PER A/C FOR PROFIDENCY

MPIL - INDEX FOR NON-INSTRUCTOR FLYING JOBS
                                                                                                                                                         002
                                                                                                                                                         002
                                                                                                                                                         002
                               - DEFIRED FLYING HOURS PER AIRCRAFT
               DH
                                                                                                                                                         302
              PLANES - ASTIVE AIFCRAFT BY MISSION
 DH.K(1)=0
                                                                                                                                                         002
              OH
                                - DESTRED FLYING HOURS DER ATPCRAFT
                                                                                                                                                         002
  DH.K(2)=0
                                                                                                                                                         002
                                - DETIRED FLYING HOURS PER AIRCRAFT
              DH
                                                                                                                                                         002
  OH.K(HPIL) =OH3 (MPIL) *TEST10.K(MPIL)
                                                                                                                                                         002
              OH - DESTRED FLYING HOURS PER AIRCRAFT
MPIL - INDEX FOR NON-INSTRUCTOR FLYING JOBS
                                                                                                                                                         002
              DMC - DESTRED FLYING HOURS/ACFT CREW PROFFICIENCY
TESTIO - TEST ON DESIRED FLYING HOURS
                                                                                                                                                         002
                                                                                                                                                         002
  TOMRS. K= SJMV() FSHPS. K, 3, TCAT)
                                                                                                                                                         002
              TOMRS - TOTAL DESIRED MISSION FLYING HOURS
DESIRED FLYING HOURS PER AVC FOR PROFIDIENCY
TOAT - CATEGORIES OF PILOT JOBS
                                                                                                                                                         002
                                                                                                                                                         002
                                                                                                                                                         002
 PHPA.K (CAT) = 4 10 URS. K (CAT) /PLANES .K (CAT)
                                                                                                                                                         002
              PHPA - PROGRAMMED FLYING HOURS PER AIRCRAFT
                                                                                                                                                         002
                               - CATEGORY ITERATION INDEX
              CAT
                                                                                                                                                         002
               AHOURS - AUTHORIZED MISSION FLYING HOURS
PLANES - ACTIVE AIFCRAFT BY MISSION
                                                                                                                                                         002
                                                                                                                                                         002
  OCRATIO. K(1)=0
                                                                                                                                                         002
              DCRATIO - DESIRED CREM RATIO TO FLY PEOGRAMMED HOURS
                                                                                                                                                         002
  DCRATIO.K(2)=)
                                                                                                                                                         003
               OCRATIO - DESTRED CHEM RATIC TO FLY PROGRAMMED HOURS
 OCRATIO. K(3)=143HL(CRT3,PHPA,K(3),J,120,20)

OCRATIO - DESTRED CFEW RATIO TO FLY PROGRAMMED HOURS

CRT3 - CREW TABLE FIGHTERS
                                                                                                                                                         003
                                                                                                                                                         003
                                                                                                                                                         903
                                                                                                                                                         003
                               - PROGRAMMEN FLYING HOUPS PER AIRCRAFT
               PHPA
                                                                                                                                                         003
  CRT3=0/.5/1/1.25/1.5/2/2.5
                                                                                                                                                         003
              CRT3
                               - COEN TABLE FIGHTERS
                                                                                                                                                         003
 DCRATIO - DESIRED CREM RATIO TO FLY PROGRAMMED HOURS
                                                                                                                                                         0031
                                                                                                                                                         0031
               CRTS - COSH TABLE BCHAERS
                                                                                                                                                         003:
                               - PROGRAMMED FLYING HOURS PER AIRCRAFT
               PHPS
                                                                                                                                                         0 03
 CRT4=0/2/2.75/3/3.75/4/6
                                                                                                                                                         003:
                          - CREW TABLE BOMBERS
              CRTA
                                                                                                                                                         003:
 DCRATIO.K(5)=[434L(CRT5,PHPA.K(5),0,240,40)

DCRATIO - DESTRED CEEW RATIO TO FLY PROGRAMMED HOURS
                                                                                                                                                         003:
               CRTS - CREW TABLE TRANSPORTS
PHPA - PROGRAMMED FLYING HOURS PER AIRCRAFT
                                                                                                                                                         0031
                                                                                                                                                         003:
 CRT5=0/3/3.7F' 4/4.25/5/8
                                                                                                                                                         0031
              CRTS - CREW TABLE TRANSPORTS
                                                                                                                                                         0031
  OFORCE.K (1) =M1 Y (FOSIZE.K-SUMV (DFORCE.K, 2, TCAT)
                                                                                                                                                         0032
      -SUM(TRNG.K) -WIND.K,SSS)
                                                                                                                                                         0032
               DEORCE - DESIRED FORCE SIZE BY MISSION
                                                                                                                                                         0032
               FORSIZE - PROGRAMMED TOTAL FORCE STZE
                                                                                                                                                         0032
 FORSIZE - PRIGRAMMED TOTAL FORGE SIZE

TCAT - CATEGORIES OF PILCT JORS

TRNG - PILOTS IN W/S TRAINING

HIND - PILOTS IN REALLOCATION PROCESS

SSS - /ILGILITY LEVEL FCR RATED SUPPLEMENT

OFORGE - DETIRED FCRCE SIZE BY MISSION

OCSIZE - DEFIRED UPT CLASS SIZE

TOTAL PROCEST OF THE CONTROL OF 
                                                                                                                                                         0632
                                                                                                                                                         0032
                                                                                                                                                         0032
                                                                                                                                                         0032
                                                                                                                                                         0032
                                                                                                                                                         003:
                                                                                                                                                         003:
                               - SYTOTHING TIMES
               ST
                                                                                                                                                         003
               TPINST - DESTRED STUDENT/INSTRUCTOR RATIO
III - MINIMUM INSTRUCTOR FORCE FOR UPT VIABILITY
                                                                                                                                                         003
  DEORCE.K (MPIL) = OCOATIO.K (MPIL) *PLANES.K (MPIL)
                                                                                                                                                         003
               OFORCE - DESTRED FORCE SIZE BY MISSION
MPIL - INDEX FOR NON-INSTRUCTOR FLYING JORS
                                                                                                                                                         003
                                                                                                                                                         003
```

```
OCKATIO - DESIRED CHEM RATIO TO FLY PROGRAMMED TOURS PLANES - ATTIVE AIRCRAFT BY MISSION III.K=IIIO+TESTO.K
                                                                                                        u u s
                                                                                                        003
                                                                                                        003
              III - MIMIMUM INSTRUCTOR FORCE FOR UPT VIARILITY
                                                                                                        003
              IIID - VIAPLE FORCE LEVEL INSTRUCTOR PILOT
TEST9 - TEST ON INSTRUCTOR FORCE MINIMUM VIABLLITY
                                                                                                        003
     OTHEOR.K=SUMV(OFORTE.K,2,TCAT)

OTHEOR - DESTRED TOTAL HISSION FORCE

OFORCE - DESTRED FORCE SIZE BY HISSION

TCAT - CATEGORIES OF PILOT JOBS
                                                                                                        003
                                                                                                        003
                                                                                                        003
                                                                                                        063
     OFOSC - IN PLACE FORCE DISCREPANCY
CAT - CATEGORY ITERATION INDEX
                                                                                                        003
                                                                                                        003
                                                                                                        003
              DECRUE - DEFIRED FORCE SIZE BY MISSION
JOB - PILOTS IN EACH CATEGORY
                                                                                                        003
     TODFOR.K=SUM() FORCE.K)+TEST3.K
                                                                                                        003
              TODFOR - DESIRED IN PLACE FORCE SIZE
DFORCE - DESIRED FORCE SIZE BY MISSION
TESTS - TEST ON DESCRIPTION
                                                                                                        003
                                                                                                        003
                         - TEST ON DESIRED TOTAL FORCE SIZE
              TEST3
                                                                                                        003
     FORSIZE. K=FOR; EIL+TEST7.K
                                                                                                        003
              FORSIZE - PROGRAMMED TOTAL FORCE SIZE
                                                                                                        0 0 3
              FORSEL - IMPOSED PILOT FORCE SEILING
TEST? - TEST ON PROGRAMMED TOTAL FORCE SIZE
                                                                                                        003!
                                                                                                        003
     FORCEIL=SUM(J) 91) +SUM(IWIND) +SUM(TRNG)
                                                                                                        0 C 3!
NOTE
                                                                                                        0031
NOTE
                                                                                                        0036
NOTE * * * * CURRENT FORCE MANAGEMENT PARAMETERS * * * *
                                                                                                        0036
NOTE
                                                                                                        0036
NOTE
                                                                                                        0038
   TOTFOR.K=SUM(JOP.K)+SUM(TENG.K)+WIND.<
                                                                                                        0036
              TOTFOR - TOTAL PILOT FORCE
                                                                                                        0036
               109
                         - PI_OTS IN EACH CATEGORY
                                                                                                        0036
              TRNG
                         - PILOTS IN W/S TRAINING
                                                                                                        0036
              CHIM
                         - PILOTS IN REALLOCATION PROCESS
                                                                                                        0036
     FORCE.K=FORSI'E.K-(TOTFOR.K-PATT.K)-4.PUPT.K
                                                                                                        0037
              FORCE - PRIGRAMMED MINUS ACTUAL FORCE SIZE
FORSITE - PRIGRAMMED TOTAL FORCE SIZE
TOTFOP - TOTAL PILOT FORCE
PATT - PRIJECTED ANNUAL ATTRITION
PUPT - PRIJECTED UPT GRADUATES
                                                                                                        0037
                                                                                                        0037
                                                                                                        0637
                                                                                                        0037
                                                                                                        0037
     PATT.K=4 +5MOOFH(SUM (ATT.JK),AST)
                                                                                                        0037
              PATT - PROJECTED ANNUAL ATTRITION
ATT - PILOT ATTRITION RATE BY CATEGORY
ST - SMOOTHING TIMES
                                                                                                        0037
                                                                                                        0037
                                                                                                        0037
     ATTADJ.K (CAT) = TABHL (TATADJ, FLEV.K, .5, 2, .5)

ATTADJ - ATTRITION ADJUSTMENT FACTOR

CAT - CATEGORY ITERATION INDEX

TATADJ - ATT RATE ADJUSTMENT FASLE

FLEV - FORCE LEVEL FACTOR FOR ATTRITION ADJUSTMENT
                                                                                                        0038
                                                                                                        0038
                                                                                                        0038
                                                                                                        0038
                                                                                                        0038
     TATAD J=.5/1/1.5/2
                                                                                                        0033
              TATADJ - ATT RATE ACJUSTMENT TABLE
                                                                                                        0038
     FLEV.K(CAT) = (FOTFOR.K/(TOTFOR.K+F)RGE.K)) *TEST5.K(CAT)
                                                                                                        6500
              FLEV - FORCE LEVEL FACTOR FOR ATTRITION ADJUSTMENT
                                                                                                        0038
              GAT - CATEGORY ITERATION INDEX
TOTFOR - TOTAL PILOT FORCE
FORCE - PROGRAMMED MINUS ACTUAL FORCE SIZE
                                                                                                        0038
                                                                                                        0039
                                                                                                        0639
     CRATIO. K(1) =0
                                                                                                        0039
              CRAFTO - ATTUAL CREW RATIOS
                                                                                                        2633
     CRATIO. 4 (2) =0
                                                                                                        0039
              CRATIO - ACTUAL CREM RATIOS
                                                                                                        0039
     CRATIO.K (MPIL) = JOB. K (MPIL) /PLANES.K(MPIL)
                                                                                                        0039
              CRATIO - ACTUAL CREW RATIOS
              MPIL - INTEX FOR NON-LING 1800 - PTL OTS IN EACH CATEGORY
                         - INTEX FOR NON-INSTRUCTOR FLYING JOBS
                                                                                                        0039
                                                                                                        0039
              PLANES - ACTIVE AIFCRAFT BY MISSION
                                                                                                        0 0 40
     FOEFC. K=SUMV(JOB.K, T, TCAT)/SUMV(DFORCE.K, T, TCAT)
                                                                                                        0040
```

```
FOEFO - SPECIFIC EFFICIENCY OF FIRCE
                                                                                                          004
              JOS - PILOTS IN EACH CATEGORY
TOAT - CATEGORIES OF PILOT JOSS
                                                                                                          164
                                                                                                          004
               DEGROE - 151 TRED FORCE SIZE BY HISSION
                                                                                                          00-
     TRYGEC. <= (SUM(TRYS. <) + HINC. K) /TOTEOR. <
TRYSEC - PITCLINE EFFICIENCY
TRYS - PILOTS IN M/S TRAINING
                                                                                                          0 04
                                                                                                          3 64
                                                                                                          004
              WIND - PILOTS IN REALLOCATION PROCESS TOTEOR - TOTAL PILOT FORCE
                                                                                                          004
                                                                                                          064
      TOTHRS.K = SUMV( A 40 17 5 . K, 3, TCAT)
                                                                                                          064
              TOTARS - TOTAL AUTHORITED MISSION FLYING HOURS
AHOURS - AUTHORIZED MISSION FLYING HOURS
TOAT - CATEGORIES OF PILOT JOBS
                                                                                                          0 64
                                                                                                          30+
                                                                                                          004
     TOTACET. K=SUM/(PLINES.K,3,TCAT)

TOTACET - TOTAL AVAILABLE MISSION AIRCRAFT
PLANES - ACTIVE AIRCRAFT BY MISSION
TOAT - CATEGORIES OF PILOT JOBS
                                                                                                          004
                                                                                                          004
                                                                                                          064
                                                                                                          004
      HEPP.K (CAT) =A+OURS.K (CAT) /JOB.K (CAT)
                                                                                                          004
              HFPO - HOJPS PER PILOT PER MISSION GAT
CAT - CATEGORY ITERATION INDEX
AMOJRS - AUTHORIZED MISSION FLYING HOURS
JOB - PILOTS IN EACH CATEGORY
                                                                                                          004
                                                                                                          00+
                                                                                                          004
                                                                                                          004
NOTE
                                                                                                          004:
NOTE
                                                                                                          004:
NOTE . . . INITIAL VALUES AND CONSTANTS . . . .
                                                                                                          004:
STOP
                                                                                                          004:
NOTE
                                                                                                          004:
      JOSI = 3425/640/4375/3000/3600
                                                                                                          004:
                         - INITIAL FORCE SIZE SY CATEGORY
                                                                                                          004
              JOSI
     ATTRATE= .02/.02/.07/.02/.02
T
                                                                                                          004
              ATTRATE - PROGRAMMED ATTRITION PATE BY CATEGORY
                                                                                                          204
     ATADJTH - 1/1/1/1 RATE ADJUSTMET TIME BY CATEGORY
T
                                                                                                          004
                                                                                                          0 [4]
     ATJC=12/15/12/12/12
T
                                                                                                          004
                         - AVERAGE TIME IN JOS SY CATEGORY
              ST JC
                                                                                                          0 64
T
     ATJTIME= 0/0/0/1/1
                                                                                                          004
              ATJITHE - AVE TIME TO ADJUST PILOT FORCE
                                                                                                          004:
     ATUPGD=1/1.3/1.9/2.2/1.4
ATUPGD - AVO TIME IN UPGRACE/REASSIGNMENT PIPE_INE
T
     DEL =7/TP INSI=1 . 99/V9LC=400
                                                                                                          0044
     DEL =7/TPINSI=L.39/V4LC=400

DEL - INITIAL AVERAGE TIME IN UPT PIPELINE

TPINSI - DESIRED STUDENT/INSTRUCTOR RATIO

V9L0 - MINIMUN VIABLE UPF CLASS SIZE

FORDEIL - IMPOSED FILOT FORCE DEILING

POLHRS=393000/ST=4/CST=1/EST=4/TST=1/SSS=500/IIIC=200
                                                                                                          0 0 44
                                                                                                          004-
                                                                                                          0044
                                                                                                          0044
                                                                                                          0044
             POLHES - TOTAL PROGRAMMED FLYING HOUPS
                                                                                                          3044
                      - SMOOTHING TIMES - VISALITY CONFERENT
               ST
                                                                                                           0044
              SSS
                                                                                                          0044
              III
                          - VIA TLE FORCE LEVEL INSTRUCTOR PILOT
                                                                                                          0045
     POLACET = 0/0/3500/1000900
POLACET - SCTIVE AIRCRAFT BY CATEGORY
                                                                                                          0045
                                                                                                          0045
     040=0/0/60/75/120
                                                                                                          0045
                          - DEFIRED FLYING HOURS/ACFT CREW PROFFICIENCY
                                                                                                          0045
NOTE
                                                                                                          0045
NOTE
                                                                                                          2045
NOTE . . . . TEST TYPHTS . . . .
                                                                                                           0045
NOTE
                                                                                                          0045
NOTE
                                                                                                          3045
      TEST1. <(C1T) => 140(= $11(CAT), RT11(CAT))
                                                                                                          0046
4
        +RAMP(RS12(CAT), T12(CAT))+1
TEST: - TEET ON AUTHORIZED HOURS
CAT - CATEGORY ITERATION INCEX
                                                                                                          2046
                                                                                                          1040
                                                                                                          J046
      TEST? . K(CAT)=1
                                                                                                          0046
         +RAMP(RS21(35T), TT21(CAT)) +RAMP(RS22(CAT), RT22(CAT))
TEST2 - TEST ON NUMBER OF AIRCRAFT
                                                                                                          0046
                                                                                                          3040
      RS11=0/0/0/0/0/0
                                                                                                          3046
```

```
4512=U/U/U/0/3/3
                                                                                    114
    RS21=0/0/0/0/0/0
                                                                                    004
    RS ? 2=0/0/0/0/0/1
                                                                                    004
    9711=0/0/6/L/.
                                                                                    304
    RT12=0/0/20/20/70
                                                                                    004
     2721=0/0/4/4/4
                                                                                     104
    9722=0/0/20/20/20
                                                                                    064
    TESTS. K= TO
                                                                                    064
C
    TC=0
                                                                                    004
                   - TEST ON DESIRED TOTAL FORCE SITE
           TESTS
                                                                                    004
    TESTA.K(CAT)=1+44 (CAT) *NOISE()+STEP (H4 (CAT), TS4(CAT))
                                                                                    004
       +SA4(CAT) -S: N(6.283-TIMF.K/P4(CAT))
TEST4 - TEST ON ATTRITION RATE
X
                                                                                    004
                                                                                    004
    44=0/0/0/0/0
                                                                                    004
     154=4/4/4/4/4/4
                                                                                    004
    54+=0/0/0/0/0
                                                                                    0 04
     04 = 20/20/20/20/21
                                                                                    004
    N4 = 0/0/0/0/0
                                                                                    064
     TESTS . K(CAT) =1
                                                                                    004
Δ
     TESTS . K= 0
                                                                                    004
     TEST7 . K= RAMP(2571, 7771) +RAMP(2572, 2772) +
                                                                                    004
     TEST? - TEST ON PROGRAMMED TOTAL FORCE SIZE
                                                                                    004
                                                                                    004
    RS 7 1= 0/R S7 2=0 /9 TT 1= 0 /RT7 2=0
                                                                                    0 04
C
     TESTS. K= 0
                                                                                    004
            TESTA
                   - TEST ON VIABLE UPT CLASS SIZE
                                                                                    0 04
A
    TEST3.K=0
                                                                                    004
                   - TEST ON INSTRUCTOR FORCE MINIMUM VIARILITY
           TEST 9
                                                                                    004
    TEST10. 4 (CAT) : 1 +STCP (H10(CAT), TS10(CAT))
                                                                                    004
           TEST 10 - TEST ON DSIRED FLYING HOURS
                                                                                    004
     H10=0/0/0/0/0
                                                                                    0045
    TS 1 0=0/0/0/0/0/0
                                                                                    0044
    TEST11.4 (34T) =1
                                                                                     005
            TEST11 - TEST ON AVE TIME IN FLYING CATEGORY
                                                                                    0050
    TEST12.4 (CAT) =1
                                                                                    0051
            TESTIZ - TEST ON ASSIGNMENT RATE TO PILOT CATEGORY
                                                                                    0051
                                                                                    0.05
NOTE
NOTE
                                                                                    0 05 0
NOTE . . . PAINTING AND PLOTTING SPECIFICATIONS . . . .
                                                                                    0050
                                                                                     0 050
NOTE
                                                                                    0 05 0
NOTE
PRINT 1) JOB/ 2) TPN; / 3) N== 0/4) OFORCE/5) ATT/5) WIND, TPINS, CAP
                                                                                    0050
* TOMESO, FORCE/') TOMECR, TOTFOR, TOOFOR, CSIZE, DOSIZE
PRINT 1) HEPP/2) DED SC/31 PATT, PREC, TRNGFC, FDEFC, TOEL/4) CRATED
                                                                                    0051
                                                                                    0 05 1
x /5) 3CRATIO/5) AT J/7) 14CURS
                                                                                    0051
PLOT JOR(1) = $/JOR(2) = 1/JOB(3) = F/JOR(4) = 8/JOB(5) = A/TOTFOR= F
                                                                                    0051
     FORSIZE =*
                                                                                    3051
PLOT TRNG(1) =1/TRNG(2) = 2/TRNG(3) =3
                                                                                    0051
     / TRNG (4) =4/ TRNG (7) =5/ WIND=W
                                                                                    0051
                                                                                    0051
PLOT PREC=R, UPT=G/CSTTE=C, DCSTZE=O/TPINS=%/FDEFC=E/TRNGFC=0
PLOT DECSC
                                                                                    3051
PLOT GRAFIG(3), DCRAFTD(T)/CRATIO(4), DCRATIO(4)/
X CRAFIG(5), DCRAFTD(T)
PRINT 1)9005T, DCOST, TCOST, UCOST/2)800ST, ACOST, TCTCOST, DCOST/3) TRAV
                                                                                    0051
                                                                                    0052
                                                                                    0052
                                                                                    0.052
    TRAV.K=WIND.K/SHM(TOJOB.JK)
NOTE
                                                                                    0052
NOTE
                                                                                    1052
NOTE . . . RUN SPECIFICATIONS . . . .
                                                                                    3 052
                                                                                    0052
NOTE
                                                                                    0052
NOTE
SPEC LENGTH= 100/07 = . 127/PLTPEF=1/PRTPER=4
NOTE
                                                                                    0 05 2
NOTE
                                                                                    OCE 2
* * * * * 200 TECC * * * * *
                                                                                    0052
                                                                                    2053
NOTE
```

```
110
    SAL . K=TOTFOR . K . SOF . K
                                                                                   005
    SCOST.K=SCOST.J+OT-SAL.J
                                                                                   005
    SCOST=0
N
                                                                                   0 05
    SCOST - PILOT SALARIES
                                                                                   0 05
.
                                                                                   005
    PCOST . K= PCOST. J+77 PCS.J
                                                                                   0 05
    PCOST=0
                                                                                   005
          PCOST - PTS COSTS
                                                                                   005
    TRAIN.K=SUM(T) JOR.JK) +TCF.K
                                                                                   005
    TODST . K = TOOST . J +DT . TRAIN . J
                                                                                   065
N
    TCOST=0
                                                                                   0054
          TOOST - COTS COSTS
                                                                                   0 054
    UPTT. K=UPT. JK+110=. K
                                                                                   065.
    UCDST.K=UCOST.J.DT.UPTT.J
                                                                                   0054
N
    UC 3ST=0
                                                                                   005.
          UCOST - JOT COSTS
                                                                                   0 054
    REGR. K=PREG.K*PCF.K
                                                                                   0054
    RCOST . Y= PCOST. J+OT . PECR.J
                                                                                   0054
N
    RCOST=0
                                                                                   0051
                   - PERPUITING COSTS
          RC OST
                                                                                   0055
    ATCST. K = SUM (AFT. JK) *ACF.K
                                                                                   005
    ACOST . K = ACOST. J+3T ATCST.J
                                                                                   0 055
N
    ACOST=0
                                                                                   0 055
           AC OS T
                   - ATTRITION COSTS
                                                                                   0 055
    TOTCOST. K=SCOST.K+PCOST.K+TCOST.K+UCOST.K
                                                                                   0055
×
    +RCOST.K +4 COST.K
                                                                                   0055
           TOTOOST - TOTAL COST
                                                                                   0055
    SCF.K=SCFK
                                                                                   005
    OCF . K = PC FK
                                                                                   0056
    TOF . K=TOFY
                                                                                   005€
    UCF.K=UCFK
                                                                                   0056
    ROF . K=RCFK
                                                                                   0056
    ACF . Y = AC FY
                                                                                   005€
    SCFK=6000/PCFK=2000/TCFK=215000/UCFK=235000
                                                                                   005€
    QCFK=13000/47 FK=2570
                                                                                   0056
    DFACT.K=1/EXP(.025"TIME.K)

DFACT - DISCOUNT FACTOR

QTROST.K=SAL.K+POS.K+TRAIN.K+UPTT.K+REDR.K+ATOST.K
                                                                                   005€
                                                                                   0.056
                                                                                   0 G 5 E
    DOTR.K=GTROST. K-DESCT.K
                                                                                   0.057
N
    OCOST=0
                                                                                   0057
    DCOST.K=DCOST.J+DT TOTR.J
                                                                                   0057
           DOOST - TOTAL COST DISCOUNTED
                                                                                   0 057
RUN
                                                                                   0 057
TP
    J091=437.5/995/9750/6000/7200
                                                                                   0057
    POLACFT = 0/0/7 00 0/ 20 00/1600
TP
                                                                                   0057
CP
    POL HQS=7 85 000
                                                                                   0057
CP RS71=-10988/RF71=4/RS72=10988/RF72=5
                                                                                   0057
RUN DOFO
                                                                                   0057
    RS 21=0/0/-.5/-.5/-.5
                                                                                   0057
    RT 21=0/0 /4/4/4
                                                                                   0058
    RS22=0/0/.5/.5/.5
                                                                                   0050
                                                                                   0058
RUN 01 9
                                                                                   0058
TP RS11=0/0/-.5/-.5/-.5
                                                                                   0658
    RT11=0/0/4/4/4
RS12=0/0/.5/.5/.5
                                                                                   0053
                                                                                   0054
TO RT12=0/0/5/5/5
                                                                                   0.054
ASC PUP
                                                                                   0050
    RS21=0/0/-.5/-.5/-.5
                                                                                   0058
    RT21=0/0/4/4/4
                                                                                   0059
    RS22=0/0/.5/.5/.3
                                                                                   0059
    RT 22=0/0/5/5/5
                                                                                   0059
                                                                                   0059
```

APPENDIX C

FORCE BUILD-UP LISTING

#### APPENDIX C

## Force Build-Up Listing

The first part of the appendix prints the model output every fourth quarter. The variables are listed first and the scales are next at E.OO. If there were changes initiated when the computer run was made, they would be listed first; then a series of plots of the variables across time follows.

In this appendix, the entire model listing follows the computer run.

PAGE	+8	PILOT	PRODUCTION-ALLOCATION MANAGEMENT	MODEL	9760
			23un0-4P		

			CHANGES	FOR RERUN	- B1A	
ORIGINAL	RS11	0.000	0.000	0.000	0.000	0.000
PRESENT	<b>RS11</b>	0.000	0.000	1.300	1.000	1.000
ORIGINAL	RT11	0.000	0.000	4.300	4.000	4.000
PRESENT	RT11	0.000	0.000	+.300	4.000	
ORIGINAL	RS12	0.000	0.000	0.000	0.030	0.000
PRESENT	RS12	0.000	0.000	-1.070	-1.000	-1.000
ORIGINAL	RT12	0.000	0.000	20.000	20.000	20.000
PRESENT	RT12	0.000	0.000	5.000	5.000	5.000
ORIGINAL		0.000				
PRESENT		10.975T				
ORIGINAL		0.000				
PRESENT		4.000				
DRIGINAL	2572	0.000				
PRESENT		-10.375T				
ORIGINAL		2.000				
PRESENT		5.000				
		TAPLE TREC	AT TIME	0.00		
		TARLE TOEC	AT TIME	0.00		

PAGE 49	TCJI9	الم د دارد دو د	N-ALLOC	ATION MAI	443E1ENT	MODEL	913
TIME	Joa	-443	NEED 2	DFORCE 2	411	WIND	90=64C
	3		3	3	7	CAP	FOOFOR
	4	4	4		L	TONEED	SSIZE
	5		5	5	5		DISTEE
	HEPP	DEDS?	PATT	CRATIO	ITAFEC	LTA	143125
	2	?	PREC	2	2	2	2
	3	3	TRNGFC	3	3	3	3
	6	4	FOEFC	4	L	4	4
	5	-	TOEL	j	5	5	5
	SCOST	2005-	TRAV				
	PCOST	40057					
	TCOST	TOTOOT					
	UCOST	DOOST					
E-00	E-00	5-00	E-00	=-00	5-00	E-00	E-00
	E-00	5-00	E-00	E-00	E-00	E-00	E-00
	E-00	E-00	E-00	E-00	E-00	5-00	E-00
	€-00	E-00	E-00	€-00	E-00	E-00	E-00
	E-00	E-00	E-00	E-00	5-00	E-00	E-G Q
	E-00	5-03	E-00	E-00	5-00	E-00	E-03
	E-00	E-00	E-00	E-00	E-00	E-00	E-00
	E -00	E-10	E-03	E-00	E-00	E-00	E 03
	E-00	E-03	E-60	E-00	E-00	E-00	€ 03
	=-00	E-00	E-00	E-00	E-00	E-00	€ 03
	E 05	E 05	E-00				
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0.00	3425.0	35 3.92	0.00	3425.0	53.500		11515.
	640.0	69.54	52.8	6+0.0	12.300		13055.
	4375.0	859.3	452.1	4375.0	97.50	1.0000	150+0.
	3000.0	582.1	310.0	3000.0	50.00	1187.	1203.2
	3600.0	5 ?0 . 3	372.0	3500.0	72.00	0.	1203.
	0.	0.0	1203.2	0.	0.	12.000	٥.
	0.	1.1	300.8	0.	0.	16.000	0.
	48.000	1	211.12	1.2500	1.2500	12.000	210.00
	25.000	7	1.0000	3.0000	3.0000	12.000	73.00
	30.000	0	7.6000	+.0000	0000	12.000	103.00
	0.	0.00	1.0000				
	0.00	0.00					
	7.	0.					
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PAGE	50	PILOT	P 70 0113 T	ON-ALLOC	ATION 44	NAGEMENT	MODEL	P14
4.	n n	3425.0	75 3.92	0.00	3425.0	53.500	1540.8 11515	
•	• •	640.0	58.5	52.8	5+0.0	12.300	1.8800 13055	
		4375.0	353.3	452.1	4375.0	37.50	1.0000 150+0	
		3000.0	582.1	310.0	3000.0	50.00	1187. 1203.	
		3600.0	5 20.3	372.0	3630.0	72.00	0. 1213	
		0.		1203.2	0.	0.		
		0.	• • • •	300.8	0.	٥.		
		48.000	.0	211.12	1.2500		12.000 210.0	
		25.000	. 2	1.0000	3.0000		12.000 75.0	
		30.000		7.0000	4.0000	0000	12.000 103.0	20070
		455.	15.6-	1.0000				
		12.33	3.01			N 1		
		1325.	2196.					
		283.	1 395 .					
8.	0 0	75 3. 1	5.54	0.00	500.0	9.927	1332.6 27821	1.
		1602.9	585.31	4307.0	5871.1	21.129	4.0000 13375	
		5233.5	911.1	3848.6	8750.0	58.98	1.3000 23321	1.
		3499.7	720.1	2718.7	5000.0	+6.13	14140. 5+11.	. 8
		4195.8	5 35 . 1	3265.9	7200.0	55.31	10023. 10957	7.
		0.	-253.1	943.8	C.	0.	6.268	J .
		0.	4263.2	1314.4	0.	0.	16.000	
		80.252	3516.=	211.13	1.4953		12.000 +20.0	0 0
		42.861	25 0 1. 3	.5890	3.4197	5.0000	12.000 150.0	0 0
		51.430	3004.2	9.1000	4.5620	3.0000	12.000 215.0	0 0
		915.	58.37	.7986				
		25.34	5.03					
		27 15 .	4271.					
		548.	3871.					
	-	• • • •						•
12.	0 0	385.2	7.5=	114.76	500.0	5.382	1342.4 2583	
		2733.5	392.13	2319.4	4935.3	39.611	2.+124 2313	
		5455.5	731.5	3651.9	3750.0	79.05	1.3000 27335	
		3705.6	593	2534.9	5000.0	53.70	11704. 559+	
		4400.0	452.1	3083.5	7200.0	53.76	7579. 3533	
		0.	114.5	913.9	0.	0.	7.273	
		0.	2201.3	1351.9	0.	0.	16.000	
		76.987		174.22	1.5587		12.000 +20.0	
		40.479		.6178	3.7056		12.000 150.0	
		1391.	28 10 · 0 132 · 15	9.1000	4.8389	3.0000	12.000 216.0	J U
		35.81	7.27	1.0454				
		39 23.	5429.					
		940.	5555.					
		340 .	7777.					

PAGE	51	PILOT	ו ב מוט טר פ	ON-ALLOC	TATION MANASEMENT	MODEL	814
16.	11	318.4	39.50	191.58	500.0 5.127	1834.5 25247.	
10.	3 4	2990.7	212.0	512.3		1.7703 22331.	
		5744.8	1054.3				
				3400.4		1.2647 25747.	
		3917.1	8 25 .	2351.0		9241. 5294.3	
		4728.5	573.1	2795.6		4365. 5336.	
		0.	181.5	1021.7	0. 0.	8.261 0.	
		0.	305.0	1120.7		16.000 0.	
		73.109	30 05 . 2	207.41		12.000 +20.00	
		38.234	2082.3	.6556		12.000 150.00	
		45.680	2471.+	8.8530	5.2540 8.0300	12.000 216.00	
		1899.	197.57	1.1529			
		48.35	9.92				
		5123.	8962.				
		1680.	7340.				
20.	00	356.7	48.73	143.32	500.0 5.372	2443.8 235+3.	
		2316.8	14.90	0.0	1592.8 44.537	1.1985 25625.	
		6626.3	1576.	2639.4	8750.0 127.57	1.0777 2+043.	
		4509.8	12 38 . 3	1839.1	6000.0 35.89	6736. 2773.6	
		5518.4	975.3	2114.4	7200.0 106.32	975. 2207.	
		0.	143.3	1231.5	0. 0.	9.670 0.	
		0.	-7 24 . 0	694.1		16.000 0.	
		63.384	21 23.7			12.000 420.00	
		33.251	1499.2	.7587		12.000 150.00	
		39.142	1581.5	7.5436		12.000 215.00	
		2470.	248.11	1.1476	0.1310	12,000 213,00	
		65.30	13.21	1.14.0			
		67 03.	12261.				
		27 55 .	9443.				
24.	44	423.8	56.03	76.25	500.0 3.384	2952.2 22239.	
		1140.2	.53	0.0	289.1 24.173	.7418 23277.	
		7878.7	2050.3	1589.3	8750.0 157.04	.9692 22739.	
		5376.9	15 30 . 5	1111.0	5000.0 114.00	4046. 3+5.8	
		6530.0	1237.3	1269.0	7200.0 138.44	-1658. +00.	
		0.00	75.2	1519.3		11.291 0.	
			-551.2				
		0.	871.7	211.4			
		53.308		270.77		12.300 +23.00	
		27.897	5 23 - 1	.9014		12.000 150.00	
		33.078	573.0	6.7841	7.2555 3.0000	12.000 215.00	
		31 29 .	258.27	1.0748			
		87.24	17.32				
		58 10 .	15 31 9 .				
		40 07 -	11737.				

PAGE 52 PILOT PROCUSTION-ALLOCATION MANASCHENT MODEL  28.00 753.0 437.30 0.60 500.0 15.388 2711.3 22154. 471.7 .00 0.0 213.8 3.952 1.2067 51001. 8520.5 1883.1 832.3 3750.0 136.09 .9138 2255 6056.2 1520.3 563.7 5000.0 127.77 2099 553.2 7237.5 1109.1 702.9 7200.0 152.69 -1513. +00. 0257.3 172.1 0. 0. 12.229 0. 0257.3 142.3 0. 0. 16.000 0. 47.615 -70.5 247.16 2.5202 2.5300 12.000 420.00 24.768 -56.7 1.0075 6.0562 5.0000 12.000 150.00 29.845 -37.3 6.3988 8.0415 3.0000 12.000 150.00 29.845 -37.3 6.3988 8.0415 3.0000 12.000 150.00 29.847 13926.  32.00 144.4 184.37 0.00 500.0 29.331 2557.7 22653. 426.7 213.42 305.3 703.1 3.588 3.2427 30733. 8744.4 1576.9 908.9 8750.0 175.99 1.0000 23153. 6004.3 1316.9 616.7 6000.0 120.85 2583. 1333.7 7189.6 1036.1 752.2 7200.0 144.70 -103. 1636. 0942.1 1889.8 0. 0. 11.847 0. 0. 275.3 345.9 0. 0. 16.000 0. 48.031 5.5 226.25 2.4904 2.5000 12.000 420.00 48.031 5.5 226.25 2.4904 2.5000 12.000 420.00 48.031 5.5 226.25 2.4904 2.5000 12.000 420.00 4601. 288.3 .9919 13650. 23936. 5297. 15627.  36.90 745.4 2.57 0.00 500.0 14.571 2255.7 23242. 1173.0 281.31 199.8 1291.9 22.929 2.1177 2996. 8645.7 1506.2 989.8 3750.0 159.01 1.0484 23742. 5927.3 1279.3 679.6 6000.0 115.87 2687. 2484.0 7110.1 963.5 817.7 7200.0 138.99 594. 2571. 0245.1 887.2 0. 0 116.000 0. 48.579 104.3 213.19 2.4702 2.55000 12.000 420.00 25.507 72.7 9878 5.9273 5.0000 12.000 150.00						
### ### ##############################	PAGE 52 PI	רטו הלסטום	TION-ALL	CATION MANASEMS	NT MODEL	P14
### ### ##############################	29.00 79	7.0 .77.2		0 500 0 15 99	9 2711 7 221:1	
8520.5 1883.1 832.3 3750.0 135.09 .9138 22554. 6056.2 1520.7 563.7 5000.0 127.77 2099. 559.2 7237.5 1109.1 702.9 7200.0 152.69 -1513. +00. 0253.0 1772.1 0. 0. 12.229 0. 47.615 -70.3 247.16 2.5202 2.53000 12.000 +20.00 24.768 -56.7 1.0075 6.0562 5.0000 12.000 150.00 29.845 -77.3 6.3968 5.0415 3.0000 12.000 150.00 33557. 277.33 .9360 110.08 22.07 11265. 20407. 4074. 13926.  32.00 1442.4 184.37 0.00 500.0 29.031 2557.7 22653. 426.7 213.43 305.3 703.1 3.588 3.2427 30733. 8744.4 1576.9 908.9 8750.0 175.99 1.0000 23153. 6004.3 1316.9 616.7 6000.0 120.85 2583. 1333.7 7189.5 1036.1 752.2 7200.0 144.70 -193. 1696. 0942.1 1889.8 0. 0. 11.847 0. 0. 275.3 345.9 0. 0. 11.847 0. 48.031 5.5 226.85 2.498. 2.5000 12.000 420.00 24.982 -4.3 .9995 5.0043 5.0000 12.000 150.00 30.043 10.7 7.0000 7.9385 5.0000 12.000 420.00 4601. 288.31 199.8 1291.9 22.929 2.1177 29996. 8645.7 1506.7 909.6 3750.0 115.37 2687. 2494.0 710.1 963.8 1279.9 699.0 118.01 10.0484 227742. 5927.3 1279.3 679.6 6000.0 115.37 2687. 2494.0 7110.1 963.8 8177.7 700.0 138.99 694. 2571. 0245.1 1877.2 0. 0. 118.01 1.0484 227742. 9. 118.9 621.0 0. 0. 11.801 0. 0. 118.01 0. 0. 118.579 104.7 213.19 2.4702 2.5000 12.000 420.00 0. 48.579 104.7 213.19 2.4702 2.5000 12.000 420.00 0. 48.579 104.7 213.19 2.4702 2.5000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 0. 25.307 72.7 9878 5.9273 5.0000 12.000 420.00 125.000						
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7237.5   1109.1   702.9   7200.0   152.69   -1513.   +00.   0257.3   1772.1   0.   0.   12.229   0.   0257.3   142.3   0.   0.   16.000   0.   47.615   -70.5   247.16   2.5202   2.5000   12.000   +20.00   24.766   -55.7   1.0075   6.0562   6.0000   12.000   150.00   29.8+5   -77.5   6.3968   8.3415   3.0000   12.000   215.00   3857.   277.33   110.08   22.07   11265.   20407.   4874.   13926.  32.00   144.2.4   18.4.37   0.00   500.0   29.031   2557.7   22653.   426.7   213.47   305.3   703.1   3.588   3.2427   30733.   8744.4   1575.9   908.9   8750.0   175.99   1.0000   23153.   6004.3   1316.9   616.7   6000.0   120.85   2583.   1333.7   7189.5   1076.1   752.2   7200.0   144.70   -193.   1696.   094.2.   1889.8   0.   0.   11.847   0.   0. 275.3   345.9   0.   0.   16.000   0.   48.031   5.5   226.85   2.4984   2.5000   12.000   420.00   24.992   -4.3   9.995   5.0043   5.0000   12.000   420.00   24.982   -4.3   9.995   5.0043   5.0000   12.000   420.00   46.01.   248.33   9.919   136.50   23936.   5297.   15627.  36.90   745.4   2.57   0.00   500.0   14.571   2255.7   2324.2.   1173.0   281.31   199.8   1291.9   22.929   2.1177   29996.   864.5.7   1506.7   989.6   8750.0   159.01   1.0484   23742.   5927.3   1279.3   679.6   6000.0   155.87   2287.   248.579   104.3   213.19   2.4702   2.5000   12.000   420.00   25.307   72.7   9878   5.9273   5.0000   12.000   420.00   25.307   72.7   9878   5.9273   5.0000   12.000   150.00					9 .9138 22354.	
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PAGE	53	PILOT	P100UCT	ON-ALLOC	M NCITA	INAS EMENT	HODEL		014
40.	2.0	463.8	8.41	36.17	500.0	9.111	2270.7	23271.	
40.		1357.6	119.60	72.6	1320.9				
		8540.9				25.666	1.7922	23548.	
			16 23.3	1073.5	3750.0	157.77	1.0433	23771.	
		5857.1	1286.7	735.8	6000.0	115.05	2900.	2433.0	
		7029.5	983	381.9	7200.0	133.08	537.	2335.	
		0.	36 . 2	1847.5	0.	0.	11.750	G.	
		0.	-36.7	608.3	<b>a</b> .	0.	16.000	0.	
		49.175	209.1	213.17	2.4403	2.5000	12.000	+20.00	
		25.610	142.5	.9762	5.8571	5.0000	12.000	150.00	
		30.727	177.	7.3031	7.3107	8.0000	12.000	215.00	
		6044.	346.90	1.0115					
		168.21	35.27						
		177 32 .	30 193.						
		5872.	18161.						
44.	0 0	449.8	48.57	50.24	500.0	3.014	2411.6	22375.	
		1120.8	21.35	5.2	1024.3	22.451	1.5650	23750.	
		8538.5	1723.7	1033.1	6750.0	172.12	1.0000	23475.	
		5885.4	1369.	711.6	5000.0	117.95	2544.	1355.1	
		7074.6	1051.1	843.9	7200.0	141.78	-61.	1731.	
		0.	50.2	1842.3	0.	0.	11.840	0.	
		0.	-95.9	466.5	0.	0.	16.000	0.	
		48.903	151.5	222.89	2.4538	2.5000			
		25.487	114.5				12.000	+20.00	
		30.532	125.	.9817	5.8854		12.000	150.00	
				7.0000	7.8607	3.0100	12.000	215.00	
		6755.	375.32	1.0287					
		186 .92	49.8-						
		197 00 .	33404.						
		6347.	19294.						
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48.	0 0	483.0	95.02	17.00	500.0	9.761	2457.4	22733.	
		850.5	48.13	58.5	333.4	17.189	1.9250	33118.	
		8749.3	1755.7	902.4	9730.0	176.83	1.0000	23233.	
		5998.3	14 36	619.7	6000.0	121.23	2340.	1552.2	
		7200.3	1054.1	742.0	7200.0	145.52	-313.	1547.	
		0.	17.3	1860.7	0.	3.	12.008	0.	
		0.	-17.1	388.0	0.	0.	16-000	0.	
		48.00+	• *	227.00	2.4398	2.5000	12.000	+20.00	
		25.007	1.7	.9999	5.9983	5.0000	12.000	150.00	
		29.999	3	7.0000	3.0003	3.0000	12.000	216.00	
		7473.	397.17	. 9998					
		206.47	45.51						
		21764.	36730.						
		6873.	20 745 .						

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52.00	653.5	79.33	0.00	510.0 13.220	2+24.9 22353.
	35 8. 3	129.91	113.7		2.0014 30211.
	4753.0	17 03.3	902.1		1.6000 23353.
	6004.6	1735.7	616.5		2377. 1/1/.6
	7139.2	10 79.7	7.5.0	7200.0 1++.52	-113. 1755.
	0.	-155.3	1877.3		11.990
	0.	44.5	429.5		16.000 0.
	47 . 98 4	-3.0	223.01		12.300 +23.30
	24.951	-3.4	1.0003		12.000 150.00
	30.003		7.0000		12.000 215.00
	3195.	417.3-	.994 1	7.9991 3.000	12.000 213.00
	225.04	50.23	• 44. 1		
	23882.	40115.			
	7341.	21 31 2.			
56.00	498.4	7.29	1.60	500.0 3.336	2371.4 22930.
	1003.3	144.4	105.8		1.7450 10392.
	8749.1	1713.4	904.9		1.0000 23450.
	5998.3	136	621.4	6330.0 119.55	2377. 1953.1
	7200.4	10-1.3	743.7	7200.0 1.3.54	97. 1974.
	0.	1.5	1876.€		11.985 0.
	0.	25.4	458.3		16.000 0.
	48.005	. 1	220.74		12.000 +23.00
	25.007	1.7	.9999		12.000 150.00
	29.998		7.0000		12.000 215.00
		:		8.0005 5.0100	12.000 215.00
	89 22 .	441.05	.9950		
		54.32			
	25953.	43 372.			
	7755.	22158.			
60.00	453.2	48.90	46.83	500.0 3.036	2370.9 23302.
60.00	1057.7	110.33	80.3		1.8636 29394.
	372 8	15 73.5	924.8		1.0000 23502.
	5983.8	1344.7	633.2	5000.0 119.31	2448. 1971.2
	7177.3	10 28 . 1	1.00		
	0.	46.5	762.5		
	0.	-6.7	492.6		16.300 0.
	48.139	25.7	219.94		12.000 420.00
	25.058	15.2	.997 1		12.000 150.00
	30.095	22.7	7.0000	7.9743 3.0000	12.000 215.00
	9642.	467.51	.9907		
	264 . 15	59.53			
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64.00	PAGE	55	PILOT	P 80 0110 T 1	ON-ALLOC	ATION M	ANASEMENT	MONEL	81
1017.5 92.1 71.1 1003.5 20.553 1.8436 50002. 8722.4 1717.2 926.4 6750.0 174.48 1.0000 23.53. 5980.1 1362.9 636.0 6000.0 119.62 2439. 1375.8 7179.2 1041.2 760.7 7200.0 143.61 -5. 1363.  0. 45.1 1868.3 0. 0. 11.972 0. 014.0 469.0 0. 0. 16.000 0. 48.152 27.5 221.58 2.4921 2.5000 12.000 420.00 25.053 19.3 .9969 5.9801 5.0000 12.000 420.00 25.053 19.3 .9969 5.9801 5.0000 12.000 150.00 30.007 20.3 7.0000 7.9768 3.0000 12.000 150.00 10362. 492.55 1.0043 283.19 64.25 30040. 49352. 86 10. 23608.  68.00 456.0 47.39 43.95 500.0 9.135 2399.2 22923. 975.0 93.21 79.0 972.8 19.329 1.9727 30148. 8743.9 1724.8 908.8 873.0 175.14 1.0000 23423. 5995.7 1370.0 623.3 5000.0 120.09 2403. 1325.9 7195.1 1045.7 74.7 7200.0 144.12 -44. 1825. 0. 44.0 1869.9 0. 0. 16.000 0. 48.033 5.1 222.37 2.4983 2.5500 12.000 420.00 25.018 4.3 .9993 5.9957 5.0000 12.000 150.00 30.020 4.9 7.0000 7.9946 5.0000 12.000 234.00 25.018 4.3 .9993 5.9957 5.0000 12.000 23.00 25.018 4.3 .9993 5.9957 5.0000 12.000 23.00 25.018 4.3 .9993 5.9957 5.0000 12.000 23.00 25.018 4.3 .9993 5.9957 5.0000 12.000 23.00 25.018 4.3 .9993 5.9957 5.0000 12.000 23.00 26.001.3 1357.3 618.9 6000.0 120.09 2391. 19.90 0. 6.1 462.2 0. 0. 16.000 0. 47.992 -1. 221.93 2.5004 2.5000 12.000 23.432. 6001.3 1357.3 618.9 6000.0 120.09 2391. 19.90 0. 6.1 462.2 0. 0. 16.000 0. 47.992 -1. 221.93 2.5004 2.5000 12.000 420.00 24.994 -1.7 1.0002 6.0013 5.0000 12.000 150.00 29.997 -5 7.0000 6.0007 3.0000 12.000 420.00 24.994 -1.7 1.0002 6.0013 5.0000 12.000 420.00 24.994 -1.7 1.0002 6.0013 5.0000 12.000 420.00 24.994 -1.7 1.0002 6.0013 5.0000 12.000 12.000 150.00	64.	0.0	454.9	43.42	45.07	500.0	9.100	2390.9	22953.
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PAGE	56	PILOT	PRODUCT:	ON-ALLOC	ATION "	ANASEMENT	MODEL	
75.	2.2	455.2	43.37	44.77	530.0	9.100	2387.9	22350.
, , ,		995.5	111.72	65.8	999.8		1.8899	30046.
		8746.7	1712.7	907.0	3750.0		1.0000	23.450.
		5997.8	1359.3	621.8	6000.0		2406.	1531.7
		7197.0	10 78 . ?	746.5	7200.0		14.	1335.
		0.	44.2	1871.3	0.		11.993	0.
		0.	4.2	470.4	0.		16.000	0.
		43.018	3.7	221.46	2.+39		12.000	420.00
		25.009	2.2	.9996	5.9978		12.000	150.00
		30.013	3.0	7.0000	7.9967		12.000	215.00
		125 25 .	564.74	.9987	1 . 3 301	3.0100	12.000	213.00
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		8739.7	17 12.5	912.6	8750.0	-	1.0000	23+53.
		5992.9	1353.7	625.8	5000.0		2416.	1834.8
		7191.5	10 39.7	750.9	7200.0		14.	1834.
		0.	44.2	1870.5	0.		11.987	0.
		0.	2	471.2	0.		16.000	0.
		48.057	10.3	221.40	2.4970		12.000	420.00
		25.030	7.1	.9988	5.9929		12.000	150.00
		30.035	8.4	7.6000	7.3908		12.000	215.00
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		997.9	104.53	81.1	996.6	19.358	1.8754	30034.
		8739.6	17 15 . 4	912.6	9750.0	174.79	1.0000	234+7 .
		5992.7	1352.0	625.9	6000.0	119.85	2415.	1371.4
		7191.6	1040.1	750.8	7200.0	143.83	0.	1370 .
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		48.057	10.2	221.63	2.4970	2.5100	12.000	+23.00
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		13967 .	613.59	1.0006				
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PAGE	37	PILOT	640 JUG1 I	NAM NCITADOLLA-	ASEMENT	MODEL	911
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		87 - 2.5	1715.			1.0000 234+2.	
		5994.9	1763.2		119.92	2410. 1354.3	
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		25.021	5.1		5.0000	12.000 150.00	
		30.025	6.1		5.0000	12.000 215.60	
		14689.	637.95	1.0002			
		398.01	92.32				
		42373.	67453.				
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		992.0	107.0-		13.341	1.8826 300+3.	
		8743.9	17 15.7		174.89	1.0000 234+3.	
		5995.8	1362.7		119.92	2408. 1367.4	
		7194.9	1940.7		1+3.31	-2. 1359.	
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		30.021	5.1		3.0700	12.000 215.00	
		15403.	552.20	.9998			
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PAGE	38	PILIT	ן ־ כניר פק פ	ON-ALLOC	M NOITA	ANDSEMENT	HODEL	F1
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		995.8	105.72	82.7	996.4	13.315	1.6803	30039.
		37-2.1	1714.3	910.6	5750.0	174.33	1.0000	234+6 .
		5994.5	1361.5	624.4	5000.0	119.38	2411.	1372.5
		7193.5	10 39.0	749.3	7200.0	1+3.36	2.	1373 .
		0.	44.?	1870.5	0.	0.	11.989	0.
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		48.0+3	7.3	221.€1	2.+977	2.5000	12.000	420.00
		25.023	5	.9991	5.39+6	5.0000	12.000	157.00
		30.027	5.5	7.0000	7.9928	. 0000	12.000	215.00
		16851.	710.55	1.0000				
		455 .38	106.35					
		48548.	79 747.					
		12575.	27 529 .					

PAGE 59 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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PAGE 50 PILDE PRODUCTION-ALLOCATION MANAGEMENT MODEL

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PAGE 51 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL 914

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PAGE 52 PIL	MOITAGOJJA-MOITCUROPA TC.	MANAGEMENT MODEL	914
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PAGE 53 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL P14

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	20.0	. 1 3 1 1	3 25
40.0	30.0		21 3 5 .34,56 1 3 5 .12,34,56 1 3 5 .12,34,56 1 3 5 .12,34,56 1 3 5 .12,34,56 1 34 56 .12 1 34 56 .12
1 34 56 . 12 . 1 34 56 . 12 . 1 34 56 . 12 . 1 34 56 . 12 . 1 3 5 . 12,34,56 . 1 3 5 . 12,34,56 . 1 3 5 . 12,34,56 . 1 3 5 . 12,34,56 . 1 3 5 . 12,34,56 . 1 3 5 . 34,56	40.0	6× x	1 34 56 . 12 1 3 5 . 12,34,56 1 3 5 . 12,34,56 1 3 5 . 12,34,56

	•	C. T.		2		•	34910
	•	1	3	5			12,3-,50
		1	3	5			12,34,56
		1	3	5			12:34,51
		1	3	5			12,34,56
		1	3	5			12,34,56
		1	3	5			12,34,56
		1	3	5		Ī	12,34,56
60.0				5 -	 		12,34,56
		i	3	5		•	12,34,56
		i	3	-		•	12,34,56
	•	i	3	5		•	
	•		3	2		•	12,34,50
	•	1		5		•	12,34,56
	•	1	3	5		•	12,34,50
	•	1	3	5		•	12,34,56
	•	1	3	5		•	12,34,56
	•	1	3	5			12,34,56
	•	1	3	5			12,34,50
70.0		21 -	3-	5 -	 		34,55
		21	3	5			34,35
		21	3	5			34,56
		21	3	5			34,55
		1	3	5			12,34,56
		1	3	5			12,34,56
		1	3	5		•	12,34,50
		i	3	5		•	12,34,56
		i	3	5		•	12,34,56
	•	1	3	2		•	
80.0	·		3-	5 -		•	12,34,56
	• • • •				 •	•	12,34,56
	•	1	3 3	5		•	12,34,56
	•	1	3	5		•	12,34,56
	•	1	3	5		•	12,34,56
	•	1	3	5		•	12,34,56
	•	1	3	5			12,34,56
	•	1	3	5		•	12,34,56
	•	1	3	5		•	12,34,50
	•	1	3	5			12,34,56
		1	3	5			12,34,50
90.0		-1	3-	5 -	 		12,34,56
		1	3	5			12,34,56
		1	3	5			12,34,56
		-	3	5			12,34,50
		1	3	5		•	12,34,56
		i	7	5		•	12,34,50
	•	;	3 3 3	5		•	
	•	i	3	-			12,34,56
	•	:	3	5 5 5		•	12,34,56
	•	:	3	2		•	12,34,56
100.0	•	1	3	5 -		•	12,34,56
100.0		-1	3-	5 -	 	•	12,34,56

APPENDIX D

FORCE DRAW-DOWN LISTING

### APPENDIX D

## Force Draw-Down Listing

The first part of this appendix prints the model output every fourth quarter. The variables are listed first and the scales are next at E.OO. If there were changes initiated when the computer run was made, they would be listed first; then a series of plots of the variables across time follows.

In this appendix, the entire model listing follows the computer run.

# PAGE 45 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL 524

			CHANGES	FOR FERJN	- 03A	
ORIGINAL	1091	7.4251	640.000	+.375T	3.000T	3.600T
PRESENT	IPOL	437.510	995 .000	3.750T	5.00 OT	7.2001
ORIGINAL	POLACE	0.000	0.000	3. 5007	1.0307	300.000
PRESENT	POLACE	3.000	0.000	7.000T	2.000T	1.8007
ORIGINAL	DOF 452	393.030T				
PRESENT	POL HSS	786.000T				
ORIGINAL	9511	0.000	C.000	0.300	0.000	0.000
PRESENT	2511	0.300	0.000	500	500	500
ORIGINAL	<b>RT11</b>	0.000	0.000	4.000	4.000	+.000
PRESENT	RT11	1.000	C.000	<b>.</b> 300	4.030	4.000
ORIGINAL	RS12	0.000	6.000	0.000	0.000	0.000
PRESENT	RS12	0.000	C.000	. 500	.500	.500
ORIGINAL	RT12	0.000	0.000	20.300	20.000	20.000
PRESENT	RT12	0.000	0.000	5.000	5.000	5.000
ORIGINAL	2521	0.000	0.000	0.000	0.000	0.000
PRESENT	<b>RS21</b>	0.000	0.000	500	500	500
ORIGINAL		0.000	0.000	· · 0 7 0	4.030	4.000
PRESENT	<b>RT21</b>	0.000	0.000	4.000	4.000	+.000
ORIGINAL	<b>RS22</b>	0.000	0.000	0.000	0.000	0.000
PRESENT		0.000	C.000	.500	.500	.500
ORIGINAL		0.000	c.000	29.000	20.000	20.000
PRESENT		0.000	0.000	5.000	5.000	5.000
ORIGINAL	9571	0.000				
PRESENT		-10.99BT				
ORIGINAL		0.000				
PRESENT		4.000				
ORIGINAL		0.000				
PRESENT		19.9981				
ORIGINAL	<b>RT72</b>	0.070				
PRESENT	9172	5.000				

PAGE +6	PILOT :	ו בנים מאי	ON-ALLOC	AP NOTA	445E1EN-	MODEL	03
TIME	73.0	TRNS	NEED	DEDRCE	177	WIND	DIMEDR
	2	2			2	TPINS	TOTFOR
	3	7	2	2 3	,	CAP	TOOFOR
	4			4	L	TONEED	25125
	5	5	-	5	•	FORCE	223225
	HEOD	DETSC	PATT	CRATIO	ITESCO	LTA	140185
	2	?	PREC	2	?	2	2
	3	3	TRNGFC	3	•	3	3
	4	4	FCEFC	4	4	4	4
	5		TOEL	5		5	5
	SCOST	RC25"	TRAV				
	PCOST	4075-					
	TCOST	FOTTOT					
	UCOST	0005-					
E-00	E-00	E-33	E-00	=- 00	E-00	E-00	E-00
	=-00	E-00	E-00	E-00	E-00	E-00	E-00
	E-00	E-00	E-00	€-00	E-00	E-30	E-00
	E-00	5-00	E-00	5-00	5-00	E-00	5-00
	5-00	E-00	E-00	E-00	E-00	E-30	E-00
	E-00	5-00	E-00	E-00	E-00	E-00	5-00
	5-00	E-00	E-00	€-00	5-00	E-00	5-00
	5-00	E-00	E-03	E-00	=-00	E-00	5 03
	E-00	E-01	E-00	E - 00	E-10	E-00	€ 03
	E-00	5-00	E-00	5-00	5-00	E-00	= 03
	E 05	5 05	5-00				
	E 05	E 07					
	E 06	5 95 5 95					
	E 05	= 9-					
0.00	437.5	45.7	52.500	500.0	8.75	2395.5	223+5.
0.00	995.00	106.71	32.09	95.00	19.300	1.9800	30053.
	8750.0	1717.3	904.17	8750.0	175.00	1.0300	23445.
	6000.0	1 354.1	620.00	5000.0	120.00	2412.8	1370.6
	7200.0	1041.5	744.00	7220.3	1+4.00	0.	1370.6
	0.	62.7	1870.6	0.	0.	12.000	0.
	0.	0.00	467.65	0.	0.	15.000	0.
	48.000	0	221.57	1.2500	1.2500	12.300	+20.00
	25.000	0	1.0000	3.3300	3.0100	12.000	150.00
	30.000	0	7.0000	4.0000	+.0000	12.000	213.00
	0.	0.00	1.0000				
	0.00	0.					
	0.	3.					
	0.0	0.					

PAGE 47 PILOT	ברכנור ר אם	ON-ALLOCATION MANOGEMENT MODEL	
4.00 458.1	42.7	41.945 500.0 9.15 2392.	1 223+6.
394.32	125.37	32.73 995.53 13.396 1.681	
8745.2	1715.3	900.09 3750.0 1790 1.000	
5996.7	1 752.5		
7196.3	10-1.?		. 1377.0
0.	41.3	1371.0 0. 0. 11.99	
0.	.71	467.62 û. 0. 16.00	
48.025	4.3	221.67 1.2493 1.2500 12.00	
25.014	3.7	.9995 2.9984 3.0000 12.00	
30.015	3.7	7.0000 3.9979 4.0000 12.00	0 215.00
721.	54.45	1.0005	
19.14	4575.		
2059.	3263.		
439.5	3115.		
8.00 5202.3		0.000 500.0 154.53 4732.	
574 .32	5.15	0.00 225.36 17.375 1.088	2 23+11.
5751.6	214 .1	0.00 4375.0 170.85 .929	1 11700.
4012.1	227.5	C.60 3000.0 119.18 1.	0 525.5
4571.9	59.3	0.00 3500.0 135.81 -9606	. 400.0
3.	-+ 702.3	2310.8 0. 0. 15.97	
0.	-549.47	156.39 0. 0. 16.00	0 0.
36.512	-1 375.5	315.91 1.64 33 1.25 10 12.00	0 210.00
18.633	-1312.1	1.3062 4.0121 3.0300 12.00	0 75.00
23.622	-971.3	5.4758 5.07990300 12.00	0 103.00
1435.	37.35	1.1145	
45.77	11333.		
4919.	7 732.		
836.2	5617.		
12.00 5194.7	+503.3	0.000 500.0 147.90 6040.	0 11138.
31+.15	.20	0.00 212.94 3.344 1.497	
+166.1	845.3	696.75 4775.0 119.51 .894	
2550.4	5 37	434.76 3000.0 31.15 1699.	
3488.5	5 99	518.65 3500.0 99.33 -8539	
0.	-+ 594.7	2122.0 0. 0. 11.60	
0.	-101.21	117.59 0. 0. 16.00	
50.407	209.3	442.00 1.1903 1.2500 12.00	-
25.312	149.3	.9572 2.850 - 3.0110 12.00	
30.956	111.2	6.2565 3.3765 4.0100 12.00	
21 34 .	41.25	1.0515	
92.58	15298.	1.47.17	
9361.	12855.		
1210.5	10911.		
	10911.		

5.

PAGE	48	PILOT	PRO 0007-1	ON-ALLOC	THEFERMAN NCITA	MODEL C
15.	33 4	537.2	+045.7	0.000	500.0 133.56	5150.9 11138.
		13.40	14.3:	22.00		1.8480 27755.
		433.1	979.7	449.09	4375.0 121.15	.8789 11538.
	3	027.3	317.	317.86		1168.0 334.3
		638.3	5=3.1	376.17		-7442. +00.0
		0.	-4337.2	1910.2		12.133 0.
		0.	57	98.59	0. 0.	16.000 G.
	4	7.371	-58.1	416.34	1.2365 1.2300	12.000 210.00
	2	4.775	-27.7	1.5113		12.000 75.00
	2	9.534	- 39 . 7	6.1521		12.000 103.00
		28 12 .	46.57	.9624		
	1	35 . 34	20635.			
	1	41 34 .	19613.			
	1	413.3	14973.			
20.	00 4	538.9	37 04 . 3	0.000	500.0 122.47	4809.3 11138.
	2	15.75	25.94	17.90	212.77 5.535	1.8701 25595.
	4	384.9	992.4	479.00	4375.0 114.53	.2807 11535.
	3	016.5	573.5	321.17	3000.0 79.79	1215.7 +03.5
	3	605.3	E57.	396.76	3600.0 94.17	-6231. +00.0
		0 .	-+199.3	1783.7	0. 0.	12.037 0.
		0.	-2.33	100.87	0. 0.	16.000 0.
	4	7.832	-9.3	401.75	1.2528 1.2500	12.000 210.00
	2	4.853	-15.5	1.6029	3.0166 3.0000	12.000 75.00
	2	9.956	-5.7	€ . 1649	4.0059 4.0000	12.000 103.00
		3465.	F1.31	.9775		
	1	76.95	25077.			
	1	85 00 .	23855.			
	1	546.9	18 773.			
24.		398.5	3259.5	0.000		4354.5 11138.
	2	13.57	23.01	18.71		1.3753 25429.
		39 2.5	903.7	474.19	4375.0 109.73	.9801 11559.
	3	001.7	721.3	328.05		1210.1 +07.5
	3	507.4	547.4	389.16	3630.0 90.32	-5117. +00.0
		0.	-3998.5	1669.1		12.019 0.
		0.	91	100.13		16.000 0.
		7.918	-7.	386.39		12.000 210.00
		4.996	-1.	1.0015		12.000 75.00
	2	9.939		€.1667	00920000 t	12.000 103.00
		4990.	37.01	.9723		
		13.62	30045.			
		2557.	28635.			
	1	651.9	21171.			

P4GE +9	PILOT	ב־כניםר אי	ON-ALLOC	ATION MANES	ETENT MO	DEL	03
25.21	-124.0	2560.7	0.000	500.0	9.17 39	57.7 11195.	
	213.34	24.97	18.34			8774 24321.	
	4 39 3. 0		466.29			8801 11535.	
	7005.7	711.7	320.11			93.0 .00.5	
	3605.4	542.4	396.28			09200.0	
	0.		1569.1	0.		.022 0.	
	0.	5-	100.13	1.		.000 0.	
	47.912	-8.0	369.57			.300 210.00	
	24.944	-6.	1.3018			.000 75.00	
	29.955	-3.,	6.1607			.000 103.00	
	4587 .	52.25	.9720				
	246 .33	52851.	• • • • •				
	263 37 .	33115.					
	1748.7	77445.					
32.00	385 2.4	2492.7	0.000	500.0	9.19 35	39.2 11135.	
,,,,,,	213.12		18.19			8783 23290.	
	4381.2	987.1	465.13			8801 11535.	
	3004.3		318.69			95.1 +00.3	
	3604.9	7	382.89			147. 430.0	
	0.		1478.8	0.		.017 0.	
	g.	. 7:	100.08	0.	70 E	.000 0.	
	47.932	-6.2	333.53			.300 213.00	
	24.964	-,. 7	1.0014			.306 75.00	
	29.959	-4.7	6.1604			.000 109.00	
	5259.	57.47	.9720				
	277 .14	35444.	• • • • •				
	29673.	37 152 .					
	1943.5	25 762.					
36.00	3587.5	2197.0	0.000	500.0 7	9.88 32	52.5 11138.	
	213.05	27.45	18.01			·7a7 22335 .	
	4380.9	879.	461.18	4375.0 3		8801 11538.	
	3304.2	698.	316.10	3000.0 5		75.1 +10.3	
	3604.4	5 73. 7	379.85	3500.0 3	0.26 -2	274. +03.0	
	0.	-3087.5	1396.2	0.	0. 12	.016 n.	
	0.	23	100.07	0.	0. 16	.000 0.	
	47.935	-5.7	337.80	1.2517 1.		.000 210.00	
	24.955	-4.2	1.0013			.000 75.00	
	29.953	-4.4	6.1604			.000 103.00	
	58 35 .	72.5	.9719				
	304 .53	39839.					
	327 08 .	40267.					
	1937.7	26 950 .					

PAGE 50 PILOT	ו בנויר כצם	ON-ALLO	AP NCITA	MESEMENT	HODEL	033
40.00 4909.9	1177.7	0.000	2530.2	105.01	2006.3	11138.
213.02	23.25	17.63	212.77	4.555	1.6769	21:03.
+330.5	9-2.	457.54	-375.0	73.59	.8300	13738.
3004.1		313.57				
	693.0		3000.0	54.25	1165.7	+00.2
3504.3	529.1	376.78	3600.0	77.08	-1388.	¥00.0
7. 7.	-3 3 3 9 . 7	1356.0	0.	0.	12.015	0.
0.	21	100.06	0.	0.	16.000	0.
47.938	-5.	247.14	1.2516		12.000	210.00
24.966	-4.1		3.0041	3.0000	12.000	73.00
29.964	-4.7	6.1603	4.0047	+.0000	12.000	103.0C
6332.	77.85	.8405				
325 .51	43169.					
35322.	+4134.					
2031.8	29213.					
44.00 4874.1	+33.4	0.000	3354.1	39.59	1657.0	11359.
255.36	131.63	143.69	384.01	5.218	3.3282	20442.
4381.2	9 54 . 5	453.01	+375 .0	99.52	.9547	14/+3.
3004.5	535.5	310.46	3000.0	51.39	1290.3	773.3
360 4. 6	524.1	373.14	3500.0	73.65	-433.	322.1
	-1499.3	1354.6	0.	0.	11.380	0.
	123.5=	193.32	3.	a.	16.000	0.
47.932	-5.7	211.44		1.2500	12.000	213.00
24.953	-4.=	1.0014	3.0045		12.000	75.00
29.952	-4.5	6.6826	4.00F1	0000	12.000	103.00
6834.	84.37	.9654	4. 00:1	0000	12.000	103.00
340.34	+5552.	. 90: 4				
37015.	45446.					
2124.1	29031.					
48.00 3945.8	275.	0.000				
			3362.1		1504.2	
659 .17	170.53		717.98	13.193	2.1196	
4379.5	958.1	450.66	4375.0	55.39	1.0000	15055.
300 3. 4	581.7	308.58	3000.0	39.56	1234.2	1337.2
369 3. 5	327.3	371.09	3600.0	71.58	135.	1435.0
0.	.583.7	1299.7	0.	0.	11.951	0.
0.	59.37	349.29	0.	0.	15.000	0.
47.943	-4.5	204.59	1.2513	1.2500	12.000	213.00
24.972	-3.+	1.0010	3.0034		12.000	75.00
29.971	-7.		4.0039	4.0000	12.000	103.00
7314.	98.45	.9745				
353.55	49745.					
384 10 .	+8451.					
2225.1	29567.					

DAGE	51	PILOT	י בנור סגם	ON-ALLOCATION MANAGEMENT MODEL	Li
52.	33	3460.5	3 25 . 2	0.000 3412.1 59.75 1491.9 1172	٤.
		779 .25	71.37	37.48 753.18 15.402 1.8049 191+	
		4375.4	355.7	451.34 4375.0 35.35 1.0000 151.	-
		3001.0	630.7	339.49 3030.3 59.02 1159.0 1-24	
		3601.2	517.	371.39 3500.0 /1.54 128. 1375	
		0.	-43.1		0.
		0.	-25.02	351.17 0. 0. 15.300	C .
		47.984	-1	205.05 1.2504 1.2500 12.000 210.	0.0
		24.93?	-1.7	1.0003 3.0010 3.0000 12.000 75.	21 (3)
		29.990	-1.2	7.00003013 4.0730 12.000 103.	
		7773.	117.72	1.0007	u u
				1.0007	
		365 .44	52801.		
		397 35 .	50421.		
		2401.0	30232.		
					-
56.	22	3414.3	377.3	0.000 3438.9 58.71 1542.6 1161	7.
	• •	674.07	34.65	26.25 642.05 13.326 1.7609 1907	
		4374.5	853.1		
					-
		2999.5	637.3	310.43 3000.0 60.19 1151.6 1185	
		3599.7	5 73. 3	372.33 3500.3 72.23 -53. 1159	. 7
		0.	24.5	1222.4 0. 0. 12.032	0 .
		3.	-32.32	296.74 ). 3. 16.000	0.
		45.006		210.23 1.2499 1.2530 12.300 213.	0.0
		25.003		.9999 2.9396 3.3300 12.300 75.	
		30.002		7.0000 3.9397 4.0000 12.000 103.	
		52 37 .	134.14	1.0064	uu
				1.0064	
		377.58	55321.		
		41002.	52477.		
		2666.2	39755.		
					-
60.	0.0	3502.4	397.1	0.000 3436.3 70.45 1552.8 1155	3.
	-	589.54	53.5	48.76 383.45 11.351 1.8704 1912	
		4374.7	860.1	452.71 4375.0 39.00 1.0000 1500	
		2939.7	597.2	310.45 3030.0 50.74 1184.4 1102	
		3599.5	5 21. T	372.49 3600.0 72.41 -110. 1105	-
		0.	-67.5		C •
		0.	-1.13	275.71 0. 2. 15.000	0.
		+8.004	. 7	212.40 1.2499 1.2570 12.000 210.	00
		25.002	. 7	.9999 2,9397 3.0000 12.000 75.	0 0
		30.002		7.0000 3.3397 4.0300 12.000 103.	
		86 95 .	148.31	1.0026	
				1.0000	
		390.03	i 8 348.		
		42332.	54539.		
		2964.2	31 753.		

PAGE	53 P1L0	יכניכר די	TON-ALLOC	THEFESTAR NCITA	MODEL	03
76.	10 1418.	5 755.	0.000	3426.2 58.39	1541.5 11515.	
	544.0	3 54. **	49.46	040.00 12.385	1.8645 19051.	
	4374.		452.15	-375.0 37.53	1.0000 150.1.	
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	4374.		452.16	4375.0 97.56	1.0000 15035.	
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	· 375.0	953.2	452.05		1.0000 15041.
	3000.0	593.3	309.98		1187.6 1205.9
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	642.38	58.57	52.52		1.8783 19054.
	4375.0	353.3	452.07	+375.0 37.49	1.0000 15042.
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96.00	3424.0	354.3	0.000	3425.4 58.48	1540.9 11515.
	640.53	58.07	52.35	639.99 12.311	1.8779 19054.
	+375.0	853.1	452.09	+375.0 87.50	1.0000 15040.
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PAGE 55	PILOT	ב־כניר חפם	ON-ALLOC	M NCITA	710354=11-	MODEL	5.3
100.00	7426.1	754	0.000	3+25.5	55.53	1541.2	11514.
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	L375.5	357.7	452.09	-375 .0	37.51	1.0000	151+0.
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	c.	'	1203.2	٥.	0.	12.300	0.
	0.	95	700.37	0.	- 0.	16.330	0.
	48. 200	7 . 7	211.15	1.2500	1.2500	12.300	210.00
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	30.000	. 1	7.0000	4.0000	0000	12.300	103.00
	13274.	304.57	1.0000				
	513.41	88 953.					
	555 93.	75550.					
	578 0. 1	74 226.					

PAGE 36 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL 033

J09(1)=S J08(2)=I J08(3)=F J09(4)=3 J03(5)=A T0TF12=F0R3IZ=\*

0.0S	2.000T .250T 2.500T 2.000T 2.000T	4.000T .500T 5.000T 4.000T 25.00T	6.000T .750T 7.500T 6.000T 70.000T	8.000T S 1.000T I 10.00CT F 8.000T 34 35.000T TH
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30.0	*I	FA S	·:	. AT . FT . FT . ST . SA,3T
40.0:	*I . T . T . T . T . T . T . T . T . T .	SA . FAS . FA . SS FA . S		. SA . SF
	I	F1 . S F1 . S F1 . S F1 . S F2 . S		. I7
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	60.0	- T ·	- B - SA		
					SF,T*
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PAGE 37 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL DES TRNG(1)=1 TRNG(2)=2 TFNG(3)=3 TPNG(4)=4 TRNG(5)=5 4IND=W

0.300 ; 0.0301 0.0001 0.0001	0.300 100. .3007 1. 2.3007 4.	1.50gT 000T 6.000T	6.000T 1 200.00C 2 2.000T 3+5 8.00CT W
1 1 1 1 • 1	. H . H . H . 52 N +	.52 4	3 3 5 3
25 3 2 3 10.02 - 4 3	1 : : : : : : : : : : : : : : : : : : :	H	. 34 . 25 . 3+,25 
. 2	. 5 4	3 1 W	13
20.0 2	5 4 3 5431 5-4-13	:	13
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1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7. 4 3 3 3 2 - 4 3 3 3	: : : : : : : : : : : : : : : : : : : :	. 12 . 2W
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PAGE 58 PILOT PROPURTION-ALLOCATION MANAGEMENT MODEL 033

PRECER UPTES DETECT DESIZE TPINSEY FORFCES TRUSFOED

0.000 20.000 0.000	1.00 0T 2.000 1.410 .410 .7	1.500T 3.600 1.700 .600	800.000 RG 2.J00T CJ 4.000 X 2.000 E .800 a - C - RG.CD C - RG.CD C - RG.CD C - RG.CD C - RG.CD
E	% . ; . ; . ; . ; . ; . ; . ; . ; . ; . ;	ε.	C . RS,CO E
RE 70 .7  RE 70	7 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 .		. CD . CD . CD, GE . CD, GE . CD . CD . CD . RG, CD . RG, CD
	スラ・ スラ・ ス・ ス・ コマ・ コマ・ コマ・ コマ・ コマ・ コマ・ コマ・ コマ・ コマ・ コマ		. RS,00 . RG,00,%a . RG,00,%a . RG,00,%a . RG,00 . RG,00 . RG,00 . RG,00 . RG,00 . RG,00
40.0 REC	a	*	. 19,00 . RG,00 . RG,00 . RG,00 . RG,00 . RG,00 . RG,00
5 F Q. 7 R G F .	C	2 n co	. 7% . 50 . 60 . 60

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	5 .7	2 0	7	20		
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• 1	E .1	RC.	7	3	•	. 00
•	5 .1	RG	7	3	•	. 00
•	E .9	GE	7	C	•	. co
•	E . 3	GF	× .	C	•	. 60
•	• • •	GP	7	3	•	. co
•	5 .9	SF	ν	5	•	. 07
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•	E .7	F	٧.	3	•	. RG,37
	5	P	7	:	•	. RG.00
	F .7	F	7	3	•	. 93,30
	F .1	c	7	3		. RS,00
	E .1		χ	3		. 96,00
	E .7	c	7	3	•	. RG,00
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				15	3												12,34,50
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			•	15	3							•				•	12,34,56
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	90.0.	 	 	15	43	-	- '	•	_	 _	_	-•-				•	12,56
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				15	3												12,34,55
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CRATIO(3)=1 QCRATI(7)=2 CFATIJ(4)=3 DCRATI(4)=4 CRATIJ(5)=5 QCRATI(5)=6

0.030 1.000	2.000	3.000	4.000 12
0.000 2.000	330	6.000	3.000 34
	5.010	5.500	8.000 55
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	15 3 .		. 12,3-,56
	15 3 .		. 12,34,56
	15 3 .		. 12,34,56
	26 4 .	1 3.	5 .
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	26 4 1 .	3 5 .	
•	26 4 1 35		•
	26 1 5 3 .	•	. 14
10.0	-2154 3	,-	16
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	12634 .	•	• 25
	12534 .		. 56
	125 3 .		. 34,55
	15 3 .		. 12,34,56
	15 43 .		. 12,55
	15 43 .		. 12,35
	15 +3		. 12,55
	15 43		
			. 12,56
20.0	-15 43	,-	12,55
•	15 43 .	•	. 12,50
	15 43 .		. 12,55
	15 3 .		. 12,34,50
	15 43 .		. 12,55
	15 43 .		. 12.55
	15 +3 .		. 12,56
	15 43 .		. 12,56
	15 43 .		. 12,50
	15 43 .	•	. 12,55
30.0	-15 43		
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	15 43 .	•	. 12,55
	15 43 .		. 12,55
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50.0	-15 43		12,56
	15 43 .		. 12,55
	15 43		. 12,56
			. 12,75

## APPENDIX E

LARGE FORCE EQUILIBRIUM LISTING

## APPENDIX E

## Large Force Equilibrium Listing

The first part of this appendix prints the model output every fourth quarter. The variables are listed first and the scales are next at E.OO. If there were changes initiated when the computer run was made, they would be listed first; then a series of plots of the variables across time follows.

In this appendix, the entire model listing follows the computer run.

PAGE 16 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

ē --

EQUILIBRIUM - 30 305 CHANGES FOR PEPIN - LFE

PRESENT		100.000				
ORIGINAL PRESENT	IBOL	7.425T	995.000	+.375T	3.00 OT	3.500T
PRESENT		0.000	0.000	3.50 gr 7.10 gr	6.000T	7.2007
PRESENT		193.000T	0.00	7.1001	2.0007	1.3001

	122	****		152505			
LIME	Joa	1540	NEED	JFJRCE	177	HIND	)[4=0R
	2		2	2	?	TPINS	TOTFOR
			3	3		CAP	אכיננו
	5		:	5		FORCE	3517E
	4500	25752	PATT	034110	DORATI	ATJ	143135
	2	, ,	PREC	2	324417	413	111112
	3	3	TRNGFC	3		3	3
	4	4	FOEFC	4	ů.	4	4
	5	=	TOEL	5	F	5	5
	SCOST	20157	TRAV	,		•	•
	PCOST	40357					
	TCOST	FOTODE					
	UCOST	ocos-					
		• • • • •	• • • • •	• • • • •	• • • • •		
E-00	E-00	5-07	E-00	5-60	5-00	E-00	5-00
	E-00	E-00	E-00	=-00	E-00	E-00	E-00
	E-00	5-00	E-00	E-00	E-00	E-00	5-00
	E-00	€-00	E-00	= - 00	E-00	E-00	E-00
	E-00	5-00 5-01	E-00	E-00	E-00	F-00	5-00
	E-00	5-07	E-00	E-00	E-00	E-00	E-00
	E-00	5-00	E-03	E-00	E-00	E-00	E 03
	E-00	5-00	E-00	E - 00	E-10	E-00	= 03
	E-00	5-00	E-00	E - 00	E-00	E-00	5 03
	E 05	F 95	E-00		2-30	2 00	- 03
	E 05	F 95					
	E 06	5 97					
	E 06	5 05					
		• • • •		• • • •			
	37.50	.5.209	62.500	500.00	3.7300	2335.5	223+5 •
	95.00	136.71	82.087	995.00	19.300	1.3800	30053.
	750.0	1717.3	904.17	8750.0	175.00	1.0000	274+5 .
	0000.0	1 354.7	620.00	6000.0	120.00	2412.8	1370.6
,	200.0	1041.5	744.00	7200.0	144.00	0.0000	1370.6
	0.	52.500	1370.6	0.	0.	12.000	0.
,	0.	0.00	467.65	0.	0.	16.000	0.
	.8.000 25.000	3323	221.97	1.2500	1.2500	12.000	+20.00
	30.000	3007	1.0000	3.0100	3.0000	12.000	150.00
			7.0000	+.0000	0000	12.000	215.00
	0.	0.07	1.0000				
	0.00	0.00	1.0000				

PAGE	is oft	ירויכרוף זכ	ION-ALLOC	THEME COMP NCITAL	MODEL LEF
4.0	.59.	25 .2.20	41.9.5	530.00 5.1508	2392.1 229.5.
	934.		82.733		
	97+5		908.09		1.0000 234+5.
	5996		622.19		2402.5 1371.3
	7195		747.67	7230.3 143.92	.9653 1372.0
		0. 41.34	1971.0		11.993 0.
		0. *05.3.	467,82		16.000 0.
	43.0		221.67		12.000 +20.00
	25.0		.9955		12.000 150.00
	30.0		7.0000	3.3979 +.0306	12.000 215.00
	72		1.0005		
	19.				
	205	3. 7.7"			
	44				
				7.1.7.1 7.7.1.1 7	
8.			-4.117		2391.9 223.5.
	995.		82.496		1.3804 30352.
	8745		907.72		1.0000 234+5.
	5997		622.45		2403.8 1372.0
	7196		746.99		1.2202 1372.3
		2. +4.11	1971.1		11.994 0.
		0. 401.1	-67.99		16.000 0.
	48.0		221.68		12.000 +20.00
	25.0		.9995		12.000 150.00
	30.0		7.3000	3.3980 4.0000	12.000 216.00
	144		.9999		
	39.				
	411	5. 4.51			
	3.				
12.					2392.0 229.5.
	995 .		82.415		1.8302 30052.
	8745		907.82		1.0000 23445.
	5996		622.49		2403.7 1371.5
	7196		746.98	7200.0 143.92	.5899 1871.8
		3. +4.31"	1871.1		11.994 0.
		0. 317.2:	467.28		16.000 0.
	49.0		221.69		12.000 +29.00
	25.0		.9905	2.3985 3.0000	12.000 150.00
	30.0	15 3.6567	7.0000	3.99600000	12.000 216.00
	216		1.0000		
	57.				
	517	3. 0.91			
	131	9. 9430.			

P4GE 19	PILOT	053JH3.I	ON-ALLOC	ATION M	NA S EMENT	HODEL	LFE
15.00	456.00 935.13 3745.7 5997.0 7196.4 0. 48.024 25.012 30.015 28.85 28.85	43.797 106.63 1715.7 1362.3 1040.7 43.399 340.13 4.3325 2.9792 3.5541 97.31 13.71	43.999 82.420 907.69 622.42 746.9 1871.2 467.77 221.69 .9995 7.0000 1.0000	500.00 936.47 5750.0 9000.0 7200.0 0. 1.2494 2.9985 3.99 0	3.1199 13.302 174.31 113.34 143.33 0. 1.2500 3.0300	2392.1 1.6802 1.0000 2403.4 .2349 11.994 16.000 12.000 12.000	22945. 31053. 23445. 1371.1 1371.4 0. 0. 420.00 150.00 216.00
20.00	9230. 1759. 456.00	13.0° 10797.	43.997 82.467	500.00	3.1200	2392.1	229+5 •
	8745.8 5997.1 7196.5	1715 1362.5 1943.7 43.997	907.59 622.35 746.82 1371.2	9750.0 5000.0 7200.0	174.91 119.94 143.93	1.0000 2403.2 .2289 11.994 16.000	234+5. 1371.0 1871.4 0.
	48.023 25.012 30.014 3605. 95.59	4.2149 2.3390 3.4533 121.67 23.39	221.69 .9965 7.0000 1.0000	1.2494 2.3986 3.9981	1.2500 3.0000 +.0000	12.000 12.000 12.000	420.00 150.00 216.00
24.00	10287. 2199. 456.00 995.11 8745.8	16. ₹₹ 12873. 	43.9¢7 82.461 907.5è	500.00 995.52 3750.0	3.1199 13.302 174.91	2392.1 1.8804 1.0000	22346. 30053. 23445.
	5997.1 7196.5 0. 48.023	1362.2 1043.7 +3.997 411.32 4.1395	622.34 746.81 1871.2 467.61 221.69	6000.0 7200.0 0. 1.2494	119.94 143.93 0. 0.	2403.2 .4026 11.994 16.000 12.000	1371.2 1371.6 0. 0.
	25.012 30.014 4329. 114.52 12345. 2639.	2.8787 3.4580 145.98 28.07 19.50 14752	.9955 7.0000 1.0000	2.9986 3.9981	3.0000	12.000	150.00 215.00

070E 30	PILIT	0877.17-	01-4660	AP HEZTA	413E45N-	HODEL	LFE
29.22	-56.JO	17.707	L1.958	510.00	9.1199	2392.0	223+6.
	995 .18	1 25.71	92.465	995.57	19.903	1.9804	30053.
	9745.8	1715.	907.51	1750.0	174.91	1.0000	234+6.
	5997.1	1362.3	622.36	0.000	119.94	2403.3	1371.3
	7196.5	1343.		7200.0	1.3.93	14	1371.7
			746.83			.+611	
	0.	47.794	1371.2	3.	0.	11.994	0.
	0.	197.01	457.83	(.	? •	16.000	0.
	43.023	4. 271	221.69	1.2494	1.2500	12.000	+20.00
	25.012	2.9013	.9995	2.9985	3.0100	12.000	150.00
	30.015	7.432	7.0000	3. 3981	0100	12.000	215.00
	5043.	170.27	1.0000				
	133.96	32.77					
	14402.	22.3					
	3079.	15477.					
32.01	456.00	. 4. *33	43.908	500.00	3.1139	2392.0	223+6.
	995 .19	105.63	82.451	995.35	13.303	1.3503	30053.
	8745.8	1715.4	907.61	3750.0	174.91	1.0000	234+6.
	5997.1	1 36 7. 1	622.36	5000.0	119.74	2403.3	13/1.3
	7196.5	1047.	746. 54	7200.0	143.93	.3969	1971.6
	3.	+3.339	1971.2	0.	0.	11.994	0.
	С.	777.53	467.82	0.	0.	16.000	0.
	48. 323	7.15	221.69	1.2494	1.2500	12.000	+20.00
	25.012	2.9791	.9905	2.3985	3.0000	12.000	150.00
	30.015	3 . 4.392	7.0000	3. 39 51	0300	12.000	215.00
	5770.	194.51	1.0000				
	153.09	37.62	1.0000				
	16453.	26.13					
	35 19 .	19715.					
	3213.						
36.00	455.00	\$7.797	43.998	300.00	3.1199	2392.1	223.5.
33.53	995.14	105.53	82.452	395.51	19.303	1.8803	30053.
	37+5.8	17 15.0	907.10	3750.0	174.31	1.0000	234+5.
	5997.1	1 752.	522.36	5000.0	113.34	2403.2	1971.2
	7196.5	1041.	746.63	7200.0	143.33	.3375	1371.6
	0.	47.330	1871.2	0.	0.	11.994	0.
		375.33					
	0.	4. 2257	467.80	0.	0.	16.000	0.
	48.023		221.69	1.2494	1.2500	12.000	+20.00
	25.012	2.19**	.9905	2.3986	7.0000	12.300	150.00
	30.014	3.476?	7.0000	3.4981	+.0000	12.000	215.00
	6491.	218.3.	1 .0000				
	172.23	42.13					
	19515.	?7.47					
	3957.	19415.					

PAGE	21	PILOT	5500.13.	ON-ALLOC	AR NOITA	NASEMENT	HODEL	L:
40.	0 0	456.00 995.12	105.73	43.997 82.459	300.00 395.51	9.1200 19.302	2392.1	223+5.
		8745.8	1,15	907.59	8750.0	174.91	1.0000	234+6.
		5997.1	1 362.	622.35	5000.0	119.94	2403.2	1371.2
		7196.5	43.39	746.82	7200.0	1+3.93	.3383	1371.6
		0.	385.03	467.80	0. 0.	0.	11.994	0.
		48.023	4.2104	221.69	1.2494	1.2500	12.000	
		25.012	2.3371	.9905	2.3936	3.0000	12.000	420.00
		30.014	3.454	7.0000	3.9981	0100	12.000	215.00
		7213.	247.27	1.0000	3.7701	*****	12.000	213.00
		191.37	46.79					
		20573.	37.65					
		4397 .	20631.					
			• : :::				· · · ·	
44.	0 0	456.00	+3.737	43.997	500.00	3.1199	2392.1	223+5.
		995.13	1715.	907.59	995.52	19.902	1.5804	30053.
		5997.1	1362.3	622.35	8750.0	174.91	1.0000	234+5.
		7196.5	1040.7	746.82	7200.0	119.34	.3636	1371.2
		0.	43.30	1871.2	° 200.0	0.	11.994	0.
		0.	136.60	467.21	ζ.	o.	16.000	0.
		48.023	4.2325	221.69	1.2494	1.2500	12.000	.20.00
		25.012	2.936	.9995	2.99 66	7.0000	12.300	157.00
		30.014	3.4542	7.0000	3.9981	4.0000	12.000	215.00
		7934.	257.54	1.0000				
		210.50	51.45					
		226 30 ·	35.33					
		48 37 .	21326.					
48.	00	435.00	.3.737	43.997	500.00	9.1199	2392.1	22946.
		995.15	105.71	82.459	935.53	19.903	1.3304	30053.
		8745.8	1715.	907.59	9750.0	174.91	1.0000	234+6.
		5997.1	1 362.3	622.35	6000.0	119.94	2403.2	1371.2
		7196.5	1041.7	746.62	7200.0	143.93	.3728	1371.6
		0.	\$93.50	1871.2	0.	0.	11.994	0.
		48.023	4.2142	221.69	1.2494	1.2500	16.000	420.00
		25.012	2.3901	.9995	2. 39 36	3.0000	12.000	150.00
		30.014	3.4642	7.0000	3.4981	4.0300	12.000	215.00
		8655.	291.32	1.0000	3.9961	0300	12.000	C 1 3 . U.U
		229.64	55.14	2.0000				
		246 83 .	39.21					
		3277 .	22852.					

PAGE	55 SIF31	5500002	CN-ALLOC	ATION MA	MASEMENT	MODEL		L
52	10 456.00	. 7.797	41.907	500.00	2.1190	2392.1	223.5.	
	995 .15	125.72	82.457	935.63	19.303	1.8804	32053.	
	8745.8		507.19	9730.0	174.31	1.0000	23446.	
	5997.1		622.35	5000.0	110.04	2403.2	13/1.2	
	7196.5	1940.	746.82	7236.0	143.93	.3645	1371.6	
	0.	+ 7. 79"	1871.2	2.	0.	11.994	0.	
	0.	391.7-	467.81	0.	0.	16.000	0.	
	49.023		221.19	1.2404	1.2590	12.000	420.00	
	25.012		.9905	2.9986	3.0300			
						15.000	150.00	
	30.014		7.0000	3.9981	·· 0000	12.000	215.00	
	9377.		1.0000					
	248.78	51.91						
	257 45 .	42.45						
	5713.							
56.			43.997	300.CO	9.1199	2392.1	229.5.	
	995 •14		82.457	995.52	19.903	1.8804	30053.	
	8745.8	1715.4	907.59	3730.3	174.91	1.0000	274+5 .	
	5997.1	1 352.5	622.35	5000.0	119.94	2403.2	1371.2	
	7196.5		740.62	7 200.0	143.93	.3565	1371.6	
	0.		1871.2					
				0.	0.	11.994	0.	
	0.		457.81	0.	0.	16.000	0.	
	48.023	4. 714	221.69	1.24 94	1.2500	12.000	+20.00	
	25.012	2.8301	.9995	2.9986	3.0000	12.000	150.00	
	30.014	3.4680	7.0000	3.9981	0000	12.000	215.00	
	10099.		1.0060				_13.00	
			1.0000					
	267.31							
	28802.							
	6155.	24548.						
60.	10 456.00	+3.793	43.907	500.00	3.1199	2392.1	223+6 .	
-	995 .14		82.458	995.52	19.303	1.8804	30053.	
	8745.8		907.59	3750.0	174.91			
						1.0000	23++6.	
	5997.1		-622.35	6300.0	119.34	2403.2	1371.2	
	7196.5	1041.7	746.82	7200.0	143.93	.3566	1371.6	
	J.	47.99	1371.2	С.	0.	11.994	0 .	
	0.	38 3 . 00	467.80	[.	0.	16.000	0.	
	48.023	4.2125	221.69	1.2494	1.2500	12.000	+20.00	
	25.012		.9965	2.9986	7.0700	12.000	150.00	
	A THE LOCAL PROPERTY.							
	30.014		7.0000	3.9981	0000	12.000	215.00	
	10919.		1.0000					
	297.05	70.1						
	30859.	49.00						
	65 95 •							

PAGE 23	PILOT	בינוינינק	ON-ALLOC	CATION MANAGEMENT	MODEL	L
64.00	456.00	. 7. 727	43.967	500.00 3.1199	2392.1	273+5.
04.03	995 .14	106.77	82.458	995.52 13.307	1.5304	30153.
	8745.8	1715	907.59	J750.3 174.91	1.0000	23++5.
					-	
	5997.1	1757.3	622.35	5000.0 119.34	2403.2	1371.2
	7195.5	1041.	7.0.62	7200.0 1.3.93	. 16 02	13/1.6
	0.	47.33	1871.2	0. 0.	11.994	0 •
	0.	347.7.	467.81	0. 0.	16.000	С.
	43.023	4.2123	221.69	1.2494 1.2510	12.300	+20.00
	25.012	2.538	.9945	2.4986 3.0110	12.000	150.00
	30.014	3.465	7.0000	3.9981 4.0110	12.000	215.00
	11540 .	389.22	1.0000			
	306.19	74.9				
	32915.	52.25				
	7035.	26111.				
68.00	455.00	47.797	43.967	500.001130	2392.1	229.5.
00.00	995 .14	105.77	A2.458	395.52 19.403	1.3804	30053.
	3745.8	1-13.4	907.59	3750.0 174.91	1.0000	23++5.
	5997.1	136 2.3	622.35	1000.0 119.34	2403.2	1371.2
	7196.5	1041.7	746.82	7230.0 143.93	. 7616	1971.6
	1.	43.99	1871.2	0. 0.	11.394	0.
	0.	382.30	467.81	0. 0.	16.000	c .
	48.023	4. 21 25	221.69	1.2494 1.2500	12.000	420.00
	25.012	2.9993	.9905	2.3956 3.9000	12.000	150.00
	30.014	3.4571	7.0000	3.3981 4.3300	12.000	215.00
	12262.	413.5	1.0000			
	325.32	79.57				
	34973.	57.37				
	7475 .	25732.				
72.00	456.00	. 7. 737	43.957	510.00 9.1199	2392.1	223+5 .
,	995 .14	105.73	82.458	995.52 19.903	1.9904	30053.
	8745.8	17 15 . 4	907.59	8750.0 174.91	1.0000	234+6.
	5997.1	1767.3	622.35	6000.0 119.34	2403.2	1971.2
				7200.0 143.93		1371.6
	7196.5	1047.	746.62		. 35 05	
	0.	43.33	1971.2	0. 0.	11.394	0.
	0.	392.60	467.11	0. 0.	16.000	0.
	48.023	4. 71.70	221.69	1.2494 1.2530	12.000	420.00
	25.012	2 . 99 9=	.9995	2.3986 3.0110	12.300	150.00
	30.014	3.45	7.0000	3.9991 +.0000	12.330	215.00
	12983.	477.9-	1.0000			
	344.45	94.20				
	37031.	59.30				
	7915.	27 719 .				

PAGE	24	DIFOL	ב בווכ שלם	ION-ALLO	M MCITAC	MASEMENT	MODEL	LFS
76.	0 0	456.30	47.777	43.957	503.00	3.1199	2392.1 22	7.5.
		995 .14	105.70	82.458	595.52	19.303		353.
		8745.8	1715.	907 .5 9	8750.0	174.91		4+5.
		5997.1	1 362.3	622.35	5000.0	119.94		71.2
		7196.5	1047.	746.82	7200.0	1 - 7 - 93		71.6
		0.	47.39	1871.2	0.	0.	11.994	0.
		0 .	38 2 . 63	467.81	0.	0.	16.000	0 .
		48.023	4. 21 75	221.69	1.2454	1.2500	12.000 42	0.00
		25.012	2. 3397	. 5905	2.9986	3.0000	12.000 15	0.00
		30.014	3.4577	7.0000	3.9961	+.0710		5.00
		137 04 .	462.22	1.0000				
		363.50	88.43	1.0000				
			5 2 . 05					
		39089.						
		8355.	27977.					
80.	0 0	456.00	+3.797	43.997	500.00	7.1139	2392.1 22	3+6.
		995 .14	106.75	82.458	995.52	19.903	1.8904 30	353.
		8745.8	1715	907.59	8750.0	174.91	1.0000 23	446.
		5997.1	1367.4	622.35	5000.0	119.34		71.2
		7196.5	1040.	746.82	7200.0	143.93		71.6
			47.99					
		0.		1871.2	Q.	0.	11.994	0 •
		0.	38 2 . 3 4	467.81	0.	0 •	16.000	0.
		48.023	+ . 2133	221.69	1.2494	1.2510	12.000 +2	3.00
		25.012	2.3331	.9995	2.3986	3.0000	12.000 15	1.00
		30.014	3.4577	7.0000	3.9981	4.0700	12.000 21	5.00
		14425 .	485.52	1.0000				
		382.73	91.55					
		41145.	55. 77					
		37 95 .	25 233.					
		91 92 •					and the base of the base of the	
84.	0 0	455.00	44.797	43.907	500.00	9.1139		346.
		995 .14	105.71	82.458	995.52	19.903		353.
		8745.8	1715.4	907.59	9750.0	174.91	1.0000 23	4+6.
		5997.1	1352.3	622.35	6000.0	119.34	2403.2 13	71.2
		7196.5	1047.	746.22	7200.0	1+3.93	.3599 13	71.6
		0.	+3.39	1871.2	(.	0.	11.994	0.
		0.	352.53	467.81	0.	0.	16.000	0.
		48.023	+ . 21 77	221.69	1.2494	1.2500		0.00
		25.012	2.3991	.9995	2.9986	3. 3330		0.00
		30.014	3.4671	7.0000	3.9991	0000	12.000 21	6.00
		15147.	317.97	1.0000				
		401 .87	98.24					
		43202.	58.53					
		9234.	28710.					

PAGE 25	PILOT	PRODUCT	ON-ALLO	ATION HE	NASEMENT	MODEL		LFE
88.30	+35.00	. 7. 797	4.1.907	503.60	3.1199	2392.1	22346 .	
	995 .16	195.77	82.458	995.52	19.903	1.5804	*2053.	
	9745.8	1715.	907.59	5750.0	174.91	1.0000	23++5.	
	5997.1	1362.1	622.35	5000.0	119.34	2403.2	1371.2	
	7196.5	1041.7		7200.0	143.93		13/1.6	
			746.62			.3601		
	3.	47.77	1971.2	0.	0.	11.994	0.	
	0.	382.32	407.61	1.	0.	16.000	0.	
	48.023	4.213	221.F9	1.2494	1.2500	12.000	+53.00	
	25. 11.2	2.3392	.9995	2.9986	7.0000	12.000	150.00	
	30.014	3.1.570	7.0000	3.99 61	4.0000	12.000	215.00	
	15363.	535.19	1.0000					
	421.01	102.37						
	45253.	71.35						
	9674 .	29131.						
92.00	454.00	41.727	43.907	500.00	9.1199	2392.1	223+6.	
,	995.14	106.77	82.4FP	935.52	13.903	1.8804	30053.	
	3745.8	1715.4	907.19	3750.0	174.91	The state of the s	23++5.	
						1.0000		
	5997.1	1 362.	622.35	6000.0	119.34	2403.2	1371.2	
	7196.5	1040.7	746.82	7200.0	143.93	.3600	1371.6	
	J .	43.33	1371.2	0.	J .	11.994	0.	
	0.	38 2.73	467.81	0.	0.	16.000	С.	
	49.023	4.213=	221 et 9	1.2494	1.2500	12.000	+20.00	
	25.012	2.4192	.9995	2.9985	3.0000	12.000	150.00	
	30.014	3.4571	7.0000	3.9931	4.0000	12.000	216.00	
	16583.	559.50	1.0000					
	440.14	107.63						
	47315.	75.12						
	10114.	29435.						
96.00	456.00	43.797	43.997	500.00	5.1199	2392.1	223+5.	
90.00	945.14	105.70	82.458	995.52	19.903	1.8804	30053.	
	87+5.8	1715.					274+5.	
			907.59	8750.0	174.91	1.0000		
	5997.1	1 76 ?. *	622.35	5000.0	113.34	2403.2	1971.2	
	7196.5	1043.	746.82	7200.0	1+3.93	.3598	1371.6	
	0.	43.99	1871.2	C •	0.	11.994	0.	
	J.	382.3	467.81	0.	<i>a</i> .	16.000	0.	
	49.023	4.2174	221.69	1.2494	1.2500	12.000	420.00	
	25.012	2.9397	.9995	2.9986	3.0000	12.000	150.00	
	30.014	7.4671	7.0000	3.9981	0000	12.000	215.00	
	17311.	; 97.97	1.0000					
	459.28	112.77						
	49374.	79.77						
	10554.	, 9740.						

PAGE 26 PIL	בנירפגי זכ	TON-ALLOCA	TION MANASEMENT	MODEL
100.00 +55.	10 +3.797	43.947	500.00 5.1130	2392.1 229.5.
995.			995.52 19.903	1.8804 32253.
8745		907.59	3750.0 174.31	1.0000 234+5.
5997		622.35	6000.0 119.94	2403.2 1371.2
7136		746.02	200.0 1.3.93	.3599 1371.6
	47.397	1971.2	0. 0.	11.994 0.
	392.31	467.81	0. 0.	16.000 0.
48.0		221.69	1.2494 1.2500	12.000 +23.00
25.0		.9965	2.9906 3.0000	12.000 150.00
30.0		7.0000	3.9951 +.0000	12.000 216.00
1803		1.0000	3.,,31	12.300 210.00
473.		1.0000		
5143				
1099				
1199	3. 30,3,.			
104.00 456.	10 .7.797	43.907	500.00 9.1199	2392.1 22346.
995.			995.52 19.903	1.9804 30053.
8745		907.59	3750.0 174.91	1.0000 23++6.
5997		622.35	5000.0 119.94	2403.2 1371.2
7196		746.82	7200.0 143.93	.3599 1371.6
	3. 3.39			11.394
		1871.2		
		467.81	0. 0.	16.000 0.
48.0		221.69	1.2494 1.2500	12.300 420.00
25.0		.9955	2.993€ 3.0000	12.000 150.00
30.0		7.0000	3.99610000	12.000 215.00
1875		1.0000		
497 .				
5348				
1143				
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108.00 456.		43.997	500.00 9.1199	2392.1 22946.
995 •		82.458	995.52 19.903	1.3804 30053.
8745		907.59	3750.0 174.91	1.0000 234+6.
5997		622.35	5000.0 119.34	2403.2 1371.2
7196		746.82	7200.0 1.3.33	.3599 1371.6
	. +3.99	1871.2	0. 0.	11.994 0.
	382.51	467.61	0. 0.	16.000 0.
48.0		221.69	1.2494 1.2500	12.000 +23.00
25.0		.9995	2.3986 3.0000	12.000 150.00
30.0		7.0000	3.9991 4.0000	12.000 215.00
1947		1.0000		
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1157	3. 30517.			

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PAGE 28	TCJIC	PRODUCT	ON-ALLO	THEFE SANAH NOTTA	MODEL LEE
124.33	456.00	47.777	43.997	500.00 2.1199	2392.1 223.5.
	995 .14	106.75	82.458		1.3804 30053.
	9745.5	1715	907.59		1.0000 23++5.
	5997.1	1 752.2	622.35		2403.2 1371.2
	7196.5	1040.	746.82	7200.0 143.93	.3599 13/1.6
	0.	43.33	1871.2		11.994
	0.	38 2 . 31	467.81		
					16.000 0.
	48.023	4 . 2134	221.69		12.000 420.00
	25.012	2.5827	.9995		12.000 153.00
	30.014	3.4570	7.0000	3.9931 4.0000	12.000 215.00
	22359.	754.11	1.0000		
	593.23	145.03			
	63774.	101.25			
	136 32 .	31242.			
128.00	455.00	43.797	43.997	500.00 9.1199	2392.1 22345.
	995 .14	106.70	82.458		1.880+ 30053.
	8745.8	1715.4	967.59		1.0000 234.6.
	5997.1	1362.3	622.35		2403.2 1971.2
	7196.5	1047.	746.82		
					.3599 1371.6
	0.	47.93	1871.2		11.994 0.
	0.	382.83	467.81		16.000 0.
	48.023	4.2134	221.59		12.000 420.00
	25.012	2. 1832	. 9995		12.000 150.00
	30.014	3.4677	7.0000	3.9981 4.0000	12.000 216.00
	23081.	773.43	1.0000		
	612.37	140.70			
	658 31 .	104.52			
	14071.	31 332 .			
132.11	455.00	. 7.797	43.997	500.00 9.1199	2392.1 229.5.
	995 .14	105.70	82.458		1.8804 30053.
	\$7+5.9	. 715	907.59		1.3000 234.5.
	5997.1	1352.4	622.35		2403.2 1371.2
	7196.5	1047.	746.82		.3599 1371.6
		1047.			
	0.		1871.2		11.994
	0.	382.81	467.81		16.000 0.
	48.023	4.2134	221.69		12.000 423.00
	25.012	2.1332	.9905		12.000 150.00
	30.014	3.4670	7.0000	3.3981 4.0000	12.000 215.00
	238 02.	912.75	1.0000		
	631.51	154.39			
	67585 .	107.73			
	145 11 .	11519.			

PAGE	29	PILOT	5600001	ON-ALLOC	M NOITE	MASEMEN	HODEL	LFE
136.	20	456.00	47.707	43.997	500.00	9.1199	2392.1	223+5.
100.	0 0	995.14	105.70					
				82.458	995.52	19.903	1.8304	30057.
		3745.8	1715	9079	3750.0	1/4.91	1.0000	23++5 •
		5997.1	1367.3	622.35	5010. 1	119.94	2403.2	1971.2
		7195.5	1047.	746.82	7200.0	143.33	.3599	1371.6
		0.	43.997	1371.2	0.	0.	11.394	0.
		0.	192.90	457.61	0.	0.	15.000	0.
		48.023	4. 213.	221.69	1.2494	1.2500	12.000	+20.00
		25.01?	2.3332	.9965	2.9986	3.0000	12.000	150.00
		30.014	3.4570	7.0000	3.3981	+.0000	12.000	215.00
		24523.	327.03	1.0000				
		550.54	159.05					
		59945.	111.05					
		14951 .	11524 .					
140.	00	455.00	+3.797	43.997	500.00	3.1199	2332.1	223+5.
-		995 .14	105.70	82.458	995.52	19.303	1.8894	30053.
		87+5.9	17 15 .	907.59	3750.0	174.91	1.0000	234+5 .
		5997.1	1362.5	622.35	5000.0	119.94	2403.2	1371.2
		7196.5	1043.	746.82	7200.0	143.93	.3599	1371.6
		3.	43.33	1371.2	0.	0.	11.994	0.
		0	382.90	467.81	0.	0.	16.000	0 •
		48.023	4 . 21 74	221.69	1.2494	1.2500	12.000	423.00
		25.012	2.9897	.9995	2.99 65	3.0000	12.000	150.00
		30.014	3.4577	7.0000	3.3931	+. 1000	12.000	215.00
		25245.	351.41	1.0000				
		669.78	153.77	1.0000				
		720 02.	114.32					
		15391.	31779.					
144.	0 0	456.00	+4.733	43.997	500.00	9.1139	2392.1	22948.
		995 .14	106.70	82.458	995.52	19.903	1.8804	30053.
		8745.8	1713.6	997.59	8750.0	174.91	1.0000	234+6.
		5997.1	1 362.3	622.75	6000.0	119.34	2403.2	1371.2
		7196.5	1041.	746.82	7200.0	143.43	.3599	1971.6
		0.	¥3.99°	1371.2	C .	0.	11.994	0 •
		0.	382.87	467.81	0.	0.	16.000	0.
		45.023	+ . 21 74	221.69	1.2494	1.2500	12.300	+23.00
		25.012	2. 9332		2,3985			
				.9995		3.0010	12.000	150.00
		30.014	3.4577	7.0000	3.9981	4.0000	12.000	215.00
		25965.	375.74	1.0000				
		598.32	153.41					
		74060.	117.52					
		158 30 .	71922.					

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PAGE	30 PILOT	בשנים משביב	ON-ALLOC	AFION 40	NASEMENT	MODEL		LFE
148.	00 455.00	.3.797	43.907	500.00	9.1139	2392.1	22346.	
	995 .14	116.77	92.458	995.52	13.303	1.38 0-	30053.	
	3745.8	1*15.5	907.59	3750.0	174.31	1.0000	234+6 .	
	5997.1	1 36 7. 2	622.35	6000.0	119.94	2403.2	1371.2	
	7196.5	1040.	746.82	7230.0	143.93	.3599	1971.6	
	0.	43.33	1871.2	0.	0.	11.994	0.	
	0.	382.30	467.21	(.	9.	16.000	0.	
	+8.023	+ . 21*4	221.69	1.2454	1.2500	12.000	+20.00	
	25.012	2.8392	.9995	2.9986	3.0770	12.000	150.00	
	30.014	7.4577	7.0000	3.9981	4.0300	12.000	215.00	
	256 87 .	300.01	1.0000					
	708.05	173.00						
	76117 .	121.35						
	16270.	31937.						

PAGE 31 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

LFE

JOB(1)=S JOB(2)=I 108(3)=F JOB(4)=B JOB(5)=A TOTFOR=F FORSI7=\*

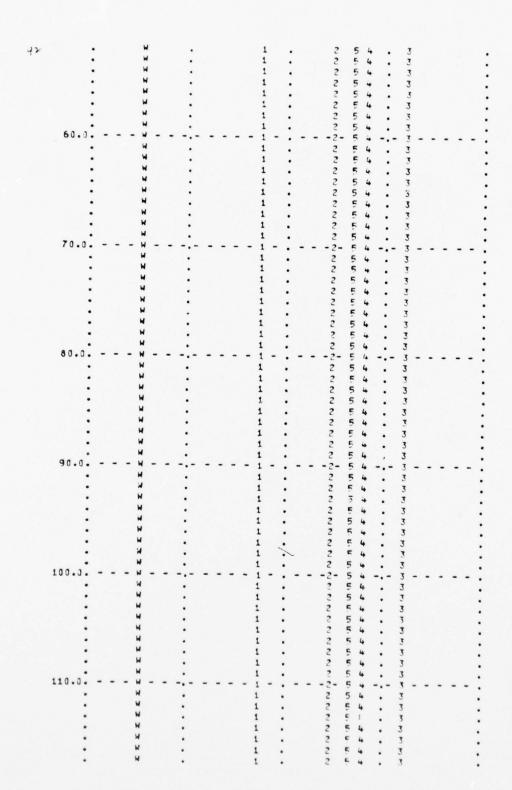
420.000	410.000	-40.01	4-0.000	+60.000 S
0.0007	,2507	.5 J OT	.750T	1.000T I
1.0007	2.3037	5.00 CT	7.500T	10.000T F
0.0007	2.1007	4.0 JOT	5.000T	8.000T 34
0.0001	18.3007	20.00 OT	70.00UT	40.000T T*
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50.1	,			5 [ SA, 37 .
			5 :	5 I SA. 31.

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				9	:	ŝ	
				q			
			•			5	I SA, ar.
				3	:	3	I SA,31.
	•		•	9		5	I SA,3T*
•				3	=	5	I S4,3**
				0	-	3	I SA, TT.
60.3.	 	 		3	- :	5	I SA, 37 .
		z u min.		3		5	I SA, 3T .
				9	=	5	I SA, ST.
				9	-	3	I SA, 9T.
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				3	-	5	I SA, 31"
70.0.	 	 			- :	5	I SA, 3T+
				a		5	I SA,97"
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				8		5	I SA, RT.
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				Q		3	I SA, RT.
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1				q	-		I SA, 3T*
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90.0.		 				3	I SA, ST.
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				9	-	3	I SA, 3T+
				9	-	3	I SA,31*
				9	=	5	I SA, AT.
				9	:	3	I SA, TT.
				9	=	5	I SA, ar.
				q	-	5	I SA, ST.
100.7.	 	 				3	I SA,3T*
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	120.0.	 				-			-	 -	-	-	-9-	_	_	-	:	_	_	+	54,91.	
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PAGE 32 PILOT PROPHRION-ALLOCATION MANAGEMENT MODEL LET TRNG(1)=1 TRNG(2)=2 TRNG(3)=3 TRNG(4)=+ TPNG(5)=5 4IN)=W

35.100	+0.000	~5.313	50.000	55.000 1
106.210	106.400	100.510	106.800	107.000 2
1.7107	1.7177	1.714T	1.716T	1.718T 3
1.3507	1.7517	1.3627	1.363T	1.3547 4
1.0387	2.3977	1.0607	1.0417	1.042T 5 2.335T W
2.3927	2.3937	2.3947	2.3951	534 3W
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•		1 . 2	54.3	•
•		1 .2	5 4 . 3	
	W .	1 . 2	5 4 . 3	
	W .	1 . 2	5 4 . 3	
	w .	1 . 2		
	w .	1 .	2 5 4 . 3	
20.0		1	zf-4 3	
•		1 .	2 54 . 3	•
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	и .	i :	25 4 . 3	
	м .	1 .	25 4 . 3	
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30.0	- 4	1	2- 5 4 3	
30.00	w .	1 .	2 5 4 . 3	
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PAGE 33 PILOT PROPURTION-ALLOCATION MANAGEMENT MODEL LEE
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PAGE 34 PILOT PROPURTION-ALLOCATION MANAGEMENT MODEL LEE DEDSC(1)=1 DEDSC(2)=2 DEDSC(3)=3 DEDSC(4)=4 DEDSC(7)=5

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PAGE 35 PILOT PROPURTION-ALLOCATION MANGEMENT MODEL

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				1	3	5 1	12,34,5
				1	3	5 1	12,34,51
				1	3	;	12,34,51
				1	3	5 1	2,34,5
				1	*	5 1	2,34,51
				1	7		2,34,51
	150.0			1			2.34.5

APPENDIX F

KOREAN WAR TO PRESENT LISTING

## APPENDIX F

## Korean War to Present Listing

The first part of this appendix prints the model output every fourth quarter. The variables are listed first and the scales are next at E.OO. If there were changes initiated when the computer run was made, they would be listed first; then a series of plots of the variables across time follows.

In this appendix, the entire model listing follows the computer run.

UN	CLASSIF	DE	C 78	DYNAMIC P L FEK IT/GOR/	KE		PROACH	TO ANAL	YSIS OF	THE U	THE USAF PILOETC(U)			
	3 OF 4 O65692	Miiii	finn gene	1 (235) 1 (235) 1 (235)	1 (536) (536) (536)	1000 1000 1000	1 63583 1 63583 1 63583	\$1,65583 -\$1,65583 -\$1,65583	(13h) (13h) (13h)	14500 14500 156000	7, 13363 1, 15363 1, 15363	1600	100	
(570)2 (6720) (6770)		Tomb			##1		攜	掤			1111			
11	£		lani.	1777-78 - 11000 - 116238	\$7,62235 ***********************************	#167383 -014283 -214283	1) (2313 1) (2313 1) (2313	1000000 -0100000 -0100000 -010000000000	01 02 105 -11 02 105 -1 02 105 -1 02 105	791 (65585 -011 (65585 -011 (65585 -011 (65585	5182282 -108282 -208282 -208283	100100 100000 100000 100000	Din	
			Ш							Etwic	Juni Juni Juni	\$765985 7665785 7665785	3(4558) 3(4558) 3(4558)	
(61185 (61185 (62185	Tigate gran lean	\$1,00000 \$1,00000 \$1,00000 \$1,00000	7542505 -2562505 -256225 -256225	110510 110510 150110	100335 105335 106335	Nesse:					H			
				7 11 11 11 11 11 11 11 11 11 11 11 11 11	3162503 -1162303 -1665303	1(05365 1(05365 1)(05365	201202 -10203 -10203	110733 110733 120733	100000 100000 100000	1) 6225 - 1,6225 - 1,6225	11 (23 lb) -1 (23 lb) -1 (23 lb)	1105103 -1105103 -1105103 -1105103	. Nest	
	111		#			m		m		1		Total Sense Sense	H	

PAGE 15 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

F --

KUREH RUW CHANGES FOR REPIN -

OPIGINAL LENGTH	100.000				
PRESENT LENGTH	159.000				
GRIGIVAL JORI	7.27T	640.000	4.3757	3.00 OT	3.500T
PRESENT JOST	q.gnaT	1.1557	13.1257	9.000T	10.3007
ORIGINAL POLACE	9.903	0.000	3.5001	1.00 OT	300.000
PRESENT POLACE	0.000	C.000	10.5007	3.00 GT	2.700T
DRIGINAL POLHES	*93.00CT				
PRESENT POLHES	1.1"0#				
ORIGINAL TEFF	1.000	1.000	1.000	1.000	1.000
	1.000	1.000	1.000	1.000	1.000
	1.000	1.000	1.000	1.000	1.000
	1.977	1.000	1.000	1.000	1.000
	1.000				
PRESENT TEFF	1.000	.870	.350	.840	. 930
	.500	.770	.730	.650	.570
	.510	.750	.550	.530	.510
	.5-1	.560	.500	.460	.410
	0				
ABOVE RANGE OF T	MALE TREC	AT TIME	0.09		
IN RANGE OF T	ABLE TEED	AT TIME	0.00		

PAGE 16 PILOT PROPURTION-ALLOCATION MANAGEMENT MODEL

TIME	و ور	-24:	NEED	DEDECE	477	MIND	DITTOR
	?	2	2	2		TEINS	121523
	3	•	3	3		CAP	133FOR
	•	-	4	•	,	TONEED	32175
	4500	75752	PATT	533.7.5		FORCE	222175
	2		PREC	CSATIO	DOSALI	LTA	
	3	7	TRNGFC	2	2		2 2 3
	i		FOSEC				
	F	7	TOEL	5	•		5 5
	SCOST	2005-	TRAV				
	PCOST	4015-					
	TCOST	707007					
	05.051	05.15					
5-00	E-00	E-00	E-00	€-00	5-00	E-00	=-00
	5-00	E-01	E-00	= - 00	5-00	F-00	5-00
	5-00	5-00	E-00	€ - 00	5-00	E-00	E-00
	E-00	5-00	E-00	5-00	E-00	5-00	E-00
	5-00	3-01	5-00	3-00	E-00	5-00	=-00
	5-00	E-01	E-00	₹-00	E-10	E-00	E-00
	E-00	5-00	E-03	€-00 €-00	E-00 E-00	E-00	E-00 E 03
	E-00	E-30	E-00	£ - 00	E-00	E-00	E 03
	E-00	-01	E-00	3 - 00	E-10	5-00	€ 03
	E 06	r gr	E-00				
		F 03					
	€ 09	= 37					
	E 05	£ 3;					
0.00	90 10 .	971.0	С.	5538.3	155.24	4427.5	35735.
	1155.0	127.3	2759.2	3339.5	21.590	4.0000	5+7+7.
	13125.	2575.1	1336.2	13125 .	245.74	1.2310	45533.
	3000.0	2000.7	930.0	0.000E	159.24	ò 15 1 . 4	+520.0
	13930.	1357.4	1115.0	1330 (.	201.88	3828.3	7275.
	0.	-151.2	3446.4	2.	2.	11.115	0.
	49.100	2*14.*	1043.5	1.25 00	1.2500	15.930	530.00
	25.000	2 -	1.0000	3.0000	7.0000	12.000	225.00
	30.000	1	8.6170	+. 1100	2000	12.300	324.00
	J.	0.11	1.0000				
	0.0	0.00					
	0.00	0.77					
	0.	٠.					

PAGE 17	21 F 3 1	ع ذا الد ل و د	ION-ALLO	ATION 44	443E4EN	HOUEL	
4.10	9413.	2574.3	۲.	9791.0	194. 10	4255.5	23935.
	3232.5	225.1	3.0	1.240.1	13.315	.4543	53334 .
	12734.	1515.	762.7	11+1 1.	253.36	1.0000	*3327 .
	3230.3	1275.3	458.5	7 3 30 .0	174.13	1784.6	1467.6
	9947 .	974.	623.4	9396 .	207.31	-2659.5	755.
	0.	- 76.	3435.9	0.	0.	13.386	0.
	0.	-19-7.5	306.9	0.	3.	16.000	0.
	45.546	-515.1	197.33	1.3173	1. 2500	12.000	5+3.10
	23.640	50. 35	1.05 29	3.17 25	3. 3300	12.000	135.75
	28.627	-451.7	7.0000	4.1918	4.0700	12.000	231.58
	1297 .	69.9:	.9617				
	33.3	3.+1					
	3.79	5.54					
	663.	E 777.					
8.00	12093.	1 32.	0 •	3720.3	257.52	4785.6	23222.
	1057.9	11.	0.0	235.5	22.537	.7705	52755.
	11390.	2195.2	1230.2	11156.	236.26	.7530	759+2.
	7581.2	1709.1	863.5	7550 .0	151.30	3050.7	315.1
	9180.	1779.2	966.6	9186.	135.57	-3228.0	+00.
	0.	- 7372.3	3504.9	0.	٥.	12.293	0.
	0.	-8 22	203.8	6.	0.	16.000	σ.
	48.295	65.	222.93	1.2426	1.2300	12.000	535.5Q
	25.227	58.7	.995 2	2.3730	3.0000	12.000	131.25
	29.999	::	6.7412	+.0002	0000	12.000	275.40
	2569.	55.57	1.0370				
	70.5	17.34					
	116?.	10441.					
12.00	12225.	1594.5		5733.0	253.99	+325.8	23279.
12.00	530.1	33.0	144.5	520.9	11.313	2.5141	51735.
	11193.	2152.2	1096.4	11025.	230.55	1.0700	37011.
	7612.2	1727.5	749.7	7550.0	153.13	2904.7	1332.8
	9113.	1292.	914.2	9072.	159.42	-1925.0	1531.
	0.	-3433.7	3456.9	0.	0.	12.034	0.
	0.	92.	333.2	0.	0.	16.000	0.
	47.635	-77.2	215.09	1.25 83	1.2510	12.000	523.20
	24.829	-57.13	1.00e2	3.02 (7	3.0100	12.000	133.00
	29.849	-45.1	7.0000	4.0203		12.000	2/2.16
	38 25 .	79.57	.9677				
	107.0	25.75					
	11.50	17.3"					
	17 70 .	15 777.					

DAGE	18	PILIT	650305-	ION-ALLO	HOITAS	4	ANAGEMENT	MODEL	
16.	00	10960.	1017.7	с.	8437	. 5	221.57	3975.2	29578 .
		115 0. 0	794.1	269.7	1350	.2	23.450	2.2791	+9956.
		10942.	2031.5	1097.6	1009		221.21	1.0644	37155 .
		7507.2	155	7.9.5	: +70		151.77	3020.5	25 - 3 - 6
		90 23.	1277.2	903.7	316		132.01	-534.7	2915.
		0.	-2472.3	3339.4		٥.	0.	11.973	0.
		0.	190.	560.9					
						0.	9.	16.000	0.
		47.737	-48.	205.01	1.25		1.2500	12.000	522.30
		24.875	-37.15	1.0046	3.91			12.006	135.75
		29.870	- 79.1		4.01	75	* . 0330	12.000	253.32
		5047.	103.31	. 97 39					
		140.3	74.27						
		15 .27	22.43						
		2097 .	19772.						
	-					-			
20.	0 0	10397 .	1347.+	0.	3431	. 2	213.15	3853.4	27557 .
		1404.3	52.5	0.0	1216		29.739	1.5862	43 754 .
		10647 .	1915.3		1050		218.27	1.0228	35939 .
		7305.0	1525.4	666.6	7200		149.76	2458.3	2227.5
		37+3.	1157.		354				2050 .
			-1965.	814.3				-1131.9	
		0.		3231.7		٥.	0.	12.239	0.
		J.	-187.	556.9		٥.	0.	16.000	G.
		47.337	-140		1.257		1.2500	12.000	504.00
		24.5+1	-105.0-	1.0137	3.04		3.0000	12.000	130.00
		29.627	-139.7	7.1593	4.05	3	+.0330	12.000	253.20
		6225.	135.30	.9832					
		171.4	42.15						
		15.70	27.74						
		2450 .	21995.						
	-					-			
24.	0 0	100 19.	1494.	0.	4204	.9	225.59	3952.8	25007 .
		971.7	2.1	0.0	554		20.370	1.2860	47332.
		10221.	1853.7	966.0	1010		214.27	1.0000	3+212.
		7310.5	1477.5	561.2	5930		145.35	2422.9	1249.6
		8410.	11 27.	795.6	9316			-2174.4	1034.
		0.	-25 04.2	3177.9		0.	0.	12.280	0.
		0.	-316.5	312.4		Ċ.	o.	16.000	
		47.459	-115.?						0.
				209.35	1.25		1.2530	12.000	+35.10
		24.713	-60.51	1.0114	3. 334		3.0000	12.300	173.25
		29.565	-93.0	7.0000	4.34	<b>1</b>	000C	12.000	2+3.+8
		7374.	159.77	1.0014					
		202.6	70.7T						
		22.07	32.31						
		2359 .	24930.						
						-			

04GE 19 91	ובי זכו	אסבירניר	-ALLOC	MOITA	MANE	3 E 4	ENT	MO	EL				
28.30 11-	15. 17	73.7	с.	7581	.1 2	4	76	390	5.8	2	+ ? :	5 9	
54	1.5	. 1	0.0	232.	5 1	1.5	36	1.1	229	4	53	14	
97	55. 17	17.1	369.4	3581	. 2	99.	12	. 9	217	3	19		
559	3.4 17	53.:	592.7	0570	.0 1	43.	29		5.5		50:		
		35.0	723.4	7334		71.			1.3			9 0	
			1-9.1				0.		366		7,		:
		17. 2	152.1				9.		300				:
4.7		7	13.37	1.27						14.0	٠,		
			.0179	3.056		. 25		12.	330		57.		
						1961	52 100	170000000			5		
			. 4518	4.067		.01	00	12.	000	-	35	, ,	2
		2.+?	.9910										
		7.3											
		7.97											
34	55. 27	512.											
• • • • •										-		•	•
32.00 122	24. 24	65.1	. 3	5378	.0 2	77.	56	417	3.5	2	151	1 4	
30	18.5	. )	0.0	213.	0	7.0	06		1 36		. 5		
		17.7	622.6	3531		21.			934		74		
		-4.1	416.6	5850.		38.			2.4		+57		
		91.5	533.2	7323		55.			5.4			0 0	
			152.8				0.				*.		
		43.5							551			0	
			116.8				9.		000			0	
			19.44	1.30		. 25			000		gą.		
			.6419	3.133		.00		1,000	000		÷ 5 •		
			. 2510	4.135	3 7	. 11	00	12.	300	3	10.	. 5	0
		7.47	. 99: 4										
		5.7											
29		2.3"											
38	107. 29	990.											
										-			•
35.00 110	25. 12	54.7	c.	5237 .	6 2	30.	44	373	5.4	2	2+1	2	
21	9.7	43.=	149.2	35 2.	+	4.5	92	4.0	000		25		
86	07. 19	10. 1	081.1	3794	. 1	79.	29		758		371		
		93.	759.9	5330.		22.			9.5		37	-	
		59.1	348.6	7 ? 36		+ 3.			3.2		11		
			998.7				0.		693			0	
		32.	219.7				0.		000				
				1.223								C	
			27 . 5			. 25		- 777757	300		22.		
		0.0	.9800	2.925		. 00	2000		000		50.		
			.8303	3.342	2 4	.07	0.0	12.	000	2	17.	. 0	8
		3.7%	.9895										
		3.1											
32		7.77											
+0	114. 32	Gra.											
								-					-

= 1GE	20	PILOT	2500121	GN-ALLO	CAT	NCI	44	MESEAEHL	HONEL	
40.	20	7225.	77.7		,	321	.5	121.37	2527.5	33355.
		1921.1	106 7	2428.6		236		32. +29	4.0200	.15.2.
		9319.	1767.	2171.1		053		157.71	1.3300	13277.
		5392.0	14 27. 7	1487.0		290		107.90		
		7547 .							7392.0	754
			1027.	1865.2		376		129.09	7512.6	13129.
		0.	95,3	2515.7			9.	0.	9.500	0.
		0.	2355.1	1575.3			٥.	2.	16.000	0.
		54.757	1717.7	200.19		. 19		1.2570	12.000	517.30
		24.512	999.02	.0719		. 63		3.0000	12.300	132.25
		34.317	1137.	9.1000	3	.49	68	4.0000	12.000	252.44
		115 37 .	?17.51	.8899	1					
		326.2	79.27							
		35.32	51.77							
		4141.	33635.							
							-			
44.	00	4:37 .		C.		165	.7	\$9.52	2747.5	23311.
		4079.5	521.	19.0	1	797	.7	74.724	1.5159	33523.
		9245.	1539.	1611.3		937		159.33	1.3000	35177 .
		6356.3	1723.2	1090.7		940	-	115.43	4055.0	5592.0
		7584.	1977.	13-4.0		920		138.32	3631.8	5035.
		0.	24 79. 2	2+03.3			0.	0.	11.356	0.
		0.	-291.9	1351.4			0.	0.	16.000	0.
		51.733	733.5	186.49		.15			12.000	
		25.902	457.5	.9266		.78		1.2500		+75.50
		32.457	523.					3.0000	12.000	1/1.00
		125 97 .	235.52	9.1000		. 59	60	0100	12.000	2+6.24
		-		1.0285	,					
		347.9	47							
		38.00	77.77							
		44 02.	34931.							
• • •		• • • •			•		-			
48.	0 0	55 85 .	1932.2	0.		2+0		124.99	3942.9	22259.
		2512.2	20.	0.0		328		55.132	.4511	40435 .
		9185.	1479.7	472.8		356	2.	205.42	1.0000	25500 .
		6300.3	1191.	322.4		3+0		1.0.70	1205.5	1133.3
		7534.	9 12.5	410.2		712	٠.	158.49 .	4273.8	.00.
		0 .	553.3	25 13 . 1			0.	0.	13.764	0.
		0.	-1933.+	283.3			٥.	0.	16.000	0.
		45.257	-5 ?2. 3	230.45	1	. 32	55	1.2510	12.000	+15.50
		23.570	-161.21	1.0593	3	. 18	20	3.0100	12.330	143.50
		28.394	-405.0	7.0000		.22		0310	12.000	213.84
		13550 .	336.00	1.0467						
		37 3. 4	91.7"							
		40.56	57.10							
		5197.	16 774.							
							-			

PAGE	?1	PILOT	ו - נוור טצט	ON-OLLCO	MCITA	44 4 4 3 EVENT	JECOF	
52.3	,	100 77 .	??61."	(.	.742.6	237.00		23350.
		701.4		0.0	217. 2	15.476	. 3576	.1919.
		9251 .	1514.	872.5	326 ;.	1377	. 2357	25'52.
		5679.4	1174.1	597.8	>570.0		2171.9	373.7
		68 33 .	35. 2	701.6	510		-6271.6	.00.
		0.	-5294.					
				2767.4	U.		12.307	0.
		0.	-43?	169.7	0.		15.300	0.
		47.925	-1?.	246.62	1.2519		12.000	395.90
		24.957	-9.97	1.0025	3. 10 52	3.0100	12.000	1+1.75
		29.873	-23.0	6.5561	4.0170	0.0000	12.000	204.12
		14541.	16.747	1.04:5				
		407.5	931					
		44.10	65.72					
		- D. L. C. C. C. C.						
	224	6223.	4 . 434					
• • • •	•	• • • •			• • • •	• • • •		
35.3	G	10367.	14.1.	ε.	3375.0		4476.9	20237 .
		355.0	. 1	0.0	212.8	3.218	1.4050	+1701.
		8094.	1557.7	735.6	930E.	197.36	.8398	24272.
		5545.4	12-5.7	5-2.7	5430.0	125.36	1977 . 1	+93.8
		5553.	973.7	643.7	55 13.		-5665.3	.00.
		1.	-5392.1	2866.3	C.		12.211	0.
		0.	-1-7.7	124.7	ű.		16.300	
			-13.2					0.
		47.477		256.13	1.26 38		12.000	33 30
		24.750	-55.41	1.0107	3.030		12.000	137.25
		29.657	1. 7	F. 2984	4.0427	. 0000	12.300	137.54
		15549.	355.37	.9963				
		44 3.5	105.97					
		47.30	*1.2*					
		6980 .	39420.					
60.0	•	10360.	?**5.	0.	3327.9	240.31	4452.0	13330 .
	•	230.6	,	10.0	21 2 .8		1.7633	+0134.
		7572.	1307.5	652.5				
					7481.		.3813	22313.
		5271.5	1949.	438.8	5130.0		1651.4	+35.6
		6297 .		550.1	6156.		-5622.5	.30.
		0.	- 7 9 31. 7	2841.2	0.	0.	12.311	0.
		0.	-17.	101.7	0.	0.	10.300	0.
		46. 80 5	-171.7	257.64	1.2319	1.2500	12.000	359.10
		24.329	-141.57	1.0252	3.1828		12.000	129.25
		29. 129	-1-1-3	6.1693	4.0916		12.000	134.58
		165 32 .	\$61.40	.9922	,,10	,	22.000	., 4. 33
		679.0	112.37	. 7766				
		51.75	75.45					
		7197.	.0643.					

PAGE	22	PILOT	רוירספי	ON-ALLO	MOITAS	42	1403E	ENT	HODEL	
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		214.7	25.5	19.0	212.		4.		1.8/36	39241 .
		7362.	1451.7	778.0	7350		15+		.8306	22133.
		5041.3	1147.7	539.3	50+0		112		1965	102.5
		6072.	*33.	628.3	5348		135.		-4023.4	430.
		0.	-> 114.	2703.1				9.	12.025	
		i.	-1.3	100.7				0.	16.300	c.
		47.923	-11.	258.76	1.25		1.23		12.000	352.50
		24.934	-1.2"	1.3023	3.01		3.00		12.000	126.00
		29. 352	-24.0	5.16.1	4.315		00		12.000	131.44
		17475.	356.53	.9664	4.31:	. 0	•••	1 1 0	12.000	131.44
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		6873.	1015	463.8	556		151		.8301	13+75.
		4727.5	\$20.0	303.7	4500		111.		1189.2	+00.7
		56 22 .	607.3	406.7	5+10		132.		-5354.4	+00.
		0.	-5763.3	2505.5				0.	12.547	· ·
		0.	-1.2	100.2		0.		0.	16.000	0.
		45.834	-711.7	253.56	1.30		1.23		12.300	315.00
		23.737	-227.57	1.0461	3.15		3.00		12.000	112.50
		28.815	-221.5	t.1610	4.16		4.00		12.000	152.00
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		6165.	1954.7	556.5	6037		1+9.		.9800	15853.
		4225.1	123.7	384.1	41+0		102.		1409.1	+03.2
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		24.426	-35.17	1.0217	1.06		3.00		12.000	103.50
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PAGE	25	PILIT	360 3/15-1	ON-ALLOC	AF HCITA	MAZENENT	HONEL
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		5253 .	1033.5	5-4.4	525 C.	105.11	.3534 1/513.
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PAGE	23	PILOT	- כויר רסם	TON-ALLO	HCITAC	MANEGERENT	MODEL	
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PAGE 30 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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PAGE 31 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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WE (E) DRAST 2 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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PAGE 32 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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PAGE 33 PILOT PROPIDITION-ALLOCATION HANASEHENT HONEL

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	31 2 3 4 . 25	
	51 27 4 . 25	
	51 23 4 . 26	
	51 23 4 . 26	
5 1.	3 2 4 . 26 . 26	
	2 • 25	
. 5 . 1 3 .	? • 25	
40.05 13	2 4 .26 2 4 .26 2 4 .26 2 4 .26	
. 5 . 1 3 .	2 4 . 26	
. 5 . 1 3 .	2 4 . 25	
. 5 . 1 3 .	? 4 . 26	
	2 + . 26	
	1 5 43 . 125	
	? 1 5 3 . 14,25	
	? + 1 5 3. 26	
	2 15 3 . 14,25	
50.0	7 -14 7 15,25	
/ VIV	1 43 . 1255	
	15 3 . 125,3-	
	15 7 . 126.74	
	. 120.	

			1.5 3	. 125, 36
•			215 43	. 25
	•		? 1 - 3	. 25
			1 1 5 4 *	. 26
			1 54 3	. 26
63.3	•		1 1 4 3	· +F,25
60			2 - 1 5	25
	•			. 25
			43	. 1255
			1 3	. 1255, 34
			1.5	. 125,34
•	•		1 45 7	. 26
	•		. , ,	. 14,25
	•		+1 7 3	. 25
70.0	. <b></b>		145 3	. 25
			- 1 543	25
				. 26
		. 2		. 25
			1 4 5 3	. 28
			14 5 3	. 25
			,	. 14,25
		: 3	1 5 3	. 14,25
				. 26
				. 1255
80.0		12	34	. 256
		. 13	34	34,25
		. 12	3.	. 256
		: 1		. 34,255
				. 1256,34
		: 1		. 1255,34
		: :		. 1255
				. 1255
		: i		. 1255
		: i	•	. 1255,34
90.0		: 1		· 1256,34
		: i	,	. 1256,34
		: i	3	. 1255,34
		. 1	3	. 1255,34
		. 1	3	. 1255,34
•		. 1	3	. 1255,34
		. 1	7	. 1255,34
•		. 1	3	. 1255,34
		. 1	•	. 1255,34
		. 1	3	. 1255,34
100.0		1		1256,34
•	•	. 1	3	. 1255,34
		. 1	3	. 1256,34
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•		· t	3	. 1255, 34
	•	: 1		. 1255,34
110 0	•	. 1	•	. 1255,34
110.0	,	1? 1?	3	1255,34
•		. 12	3	. 34,10,20
•	•	. 1?	3	. 34,15,26
•	•	. 1?	3 3 3 3	. 3-,15,25
•		. 1?	3	. 34,15,20
	•			. 24,13,20
100		. 12		. 3-,15,25
:		: 12		. 34,15,26
:		: 12 : 12 : 12 : 12 : 13	:	. 34,15,25 . 34,15,26 . 34,15,25
		: 12 : 12 : 12 : 12 : 17		. 34,15,26

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157	129.1		 1 -		1255,3	£ 1.
.,			1	7	. 1205, 3	
			ī	7	. 1255, 3	
			1	7	. 1256, 3	
			1	7	. 1255,3	
			i	7	. 1255,3	
			1	,	. 1255, 3	
			i	3	. 1255, 3	
			1	7	. 1255, 3	
			i	7	. 1255,3	
	130.3		 12 -		3+,15,	
			12	3	3+,15,	
			1?	7	. 34,15,	
			12	3	. 34,15,	
			1?	7	. 34,15,	
			1?	3	. 34,15,	2
			1?	7	. 3-,15,	2
			13	3	. 3-,15,	2
			12	7	. 34,15,	
			5.1	3	. 126, 76	
	147.0		 1 -	3	1255,3	4
			1	3	. 1255,3	
			1	3	. 1255,3	
			1	3	. 1255, 3	4
			1	?	. 1255,3	4
			1	3	. 1255,3	4
	• 110	•	1	3	. 1255,3	
			1	3	. 1255,3	
			1	3	. 1255,3	4
			1	3	. 1256,3	
	150.0	,	 12 -	3	34,15,	
					, ,	

APPENDIX G

ATTRITION LISTINGS

## APPENDIX G

## Attrition Listings

The first part of this appendix prints the model output every fourth quarter. The variables are listed first and the scales are next at E.OO. If there were changes initiated when the computer run was made, they would be listed first; then a series of plots of the variables across time follows.

In this appendix, the entire model listing follows the computer run.

PAGE 16 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

20:

G -- ATTAITION

CHANGES FOR FERUN -

ORIGINAL H4 0.000 0.000 0.000 0.000 0.000 PRESENT H4 .500 .500 .500 .500

PAGE 17 PILOT PROPURTION-ALLOCATION MANAGEMENT MODEL

TIME	J0 9		NEED	3500.05			
1145				CFORCE	ATT	MIND	DIMEOR
	2	2	2	2	2	TPINS	TOTFOR
	•	3	3	3	•	CAP	122205
	4	4	4	•		TONEED	SSIZE
	5	5	5	5		FORCE	DOSTZE
	HEPP	0.023	PATT	CRATIO	DORATI	ATJ	143125
	2		PREC	2	2	2	2
	3	3	TRNGFC	- 3	3	3	
	4	4	FOEFC	+	4	4	4
	5	5	TOEL	5	5	5	
	SCOST	RCOS-	TRAV				•
	PCOST	ACOS"					
	TCOST	107005					
	UCOST	2025					
	00031	30 13					
5-00	E-00	F-01	E-00	E-00	E-QQ	E-00	=-00
00	E-00	5-00	E-00	5-00	E-00	E-00	E-00
	E-00	F-00	E-00	5-00			
	E-00				E-30	E-00	=-00
		E-00	E-00	E-00	E-00	=-00	E-00
	E-00	5-00	E-00	E - 00	E-00	E-00	E-00
	E-00	5-00	E-CO	5-00	5-00	E-00	E-00
	E-00	5-00	E-00	E-00	E-00	E-00	E-00
	E-ac	E-00	€-03	E-00	E-00	E-00	€ 03
	E-00	5-00	E-00	E-00	=-00	E-00	€-00
	E-00	=-00	E-00	€-00	E-00	E-00	€ 03
	E 05	E 05	E-00				
	€ 06	= 04					
	E 06	€ 05					
	€ 05	5 05					
0.00	3425.0	351.92	0.	3425.0	59.50	1540.8	11515.
	640.0	69.6-	52.80	640.0	12.900	1.8800	13055 .
	4375.0	958.35	452.08	4375.0	17.50	1.0000	150+0.
	3000.0	582.01	310.00	3000.0	50.000	1186.9	1203.2
	3600.0	520.90	372.00	3600.0	72.00	0.00	1203.2
	0.	0.00	1203.2	C.	0.	12.000	0.
	0.	0.00	300.80	(.	0.	16.000	0.
	48.000	200	211.12	1.2500	1.2500	12.000	210.00
	25.000	002	1.0000	3.0000	3.0000	12.000	75000.
	30.000	000	7.0000	4.0000		12.000	103.00
	0.	0.70	1.0000				237.00
	0.00	0.00					
	0.	0.					
	0.	ő.					

PAGE	18	PILOT	250 202	ION-ALLO	CATION	44	1463E4EN-	MODEL	
4.	0 0	3425.0	353.92		3425	0	102.75	1540.8	11515.
		640.0	63.5	52.40	540	. 0	19.210	1.9800	13055 .
		4375.0	353.7:	452.08	+375	-	131.25	1.0000	150 . 0
		3000.0	392.00	*10.00	3000		90.000	1185.9	1203.2
		3600.0	5 20.30	372.00	3500		108.30	.00	1203.2
		0.	.00						
				1203.2		٠.	0.	12.000	0.
		0.	.00	300.80		2.	0.	16.000	0.
		48.00C	. 300	211.12	1.25		1.2370	12.000	210.00
		25.000	.003	1.0000	3.00		3.0000	12.000	75000.
		30.000	• 100	7.0000	4.03	0 0	0000	12.000	103.00
		459 .	15.54	1.0000					
		12.33	3.01						
		1325.	2095.						
		253.	1995.						
		255.	1 5 7 5 .			_			
5.	• •	26.0%	17.62		2919	-	77.34	4.30 6	
5.	0 3	2534.5		0.				1490.6	12113.
		942.2	304.27	252.08	1128		27.143	2.2643	13553.
		4333.6	333.30	511.32	4375		124.95	1.0133	15013.
		2969.0	741.27	352.78	3000	.0	95.532	1532.0	2133.4
		3571.1	564.75	416.58	3600	. 0	102.38	767.28	2730.0
		0.	225.0.	1532.7	(	١.	0.	11.715	0 .
		0.	185.94	533.35	(	١.	0.	16.000	0.
		48.458	.1.379	218.43	1.235		1.2500	12.000	219.00
		25.261	31.011	.9368	2.969		3.0000	12.000	75000.
		30.243	28.977	7.0934	3.967		4.0000	12.000	103.00
		903.	37.02	1.0046	3.90	,	4.0000	12.000	103.00
			7.30	1.00-6					
		24.49							
		2515.	4154.						
		569.	3792.						
						-			
12.	00	2000.7	144.30	c.	2734	.6	57.34	1427.3	12227 .
		1259.8	150.94	74.02	1252.	4	37.287	1.8206	19300.
		437 2.0	3 27.34	487.69	4375	.0	125.38	1.0348	15022.
		2998.2	745.95	334.13	3000	.0	95.572	1298 . 0	2343.3
		3596.5	566.87	402.17	3500	. 0	103.97	691.44	2233.1
		0.	×93.90	1607.7		١.	0.	12.029	0.
		0.	-37.4"	587.08			0.	16.000	0.
		48.033	3.022	220.93	1.249		1.2500	12.000	210.00
		25.015	1.77%	.9992	2.998		3.0000	12.000	75000.
		30.023	3.463	7.2438	3.996	25	0100	12.000	103.00
		1350.	57.3=	1.0006					
		36.32	11.47						
		3893.	5 25 3 .						
		895 .	5411.						
						-			

PAGE	19	PILOT	י בניר ס אס	TON-ALLO	CATION	4	ANDJEMENT	MODEL	
16.	סכ	2211.1	727.63	0.	2925.	. 4	55.57	1625.1	11995.
		1104.3	47.33	24.76	1020			1.5896	13519 .
		+369.3	3 75.75	495.65	4375		130.06	1.0000	1.321.
		2995.6	142.0	339.66	3000	20.2		1268.3	1565.8
		3594.7	1587	407.79	3600			140.92	1730.9
		0.	314.2"	1650.0		0.		12.067	0.
		0.	-53.45	466.45		0.	0.	16.000	0.
		45.076	6.747	229.18	1.24			12.000	210.00
		25.037	4.437	.9985	2.999			12.000	75000.
		30.044	5.293	7.0000	3.994	+1	+. 2200	12.000	103.00
		1791 .	95.22	1.0210					
		48.79	15.50						
		5215.	8500.						
		1335.	5997.						
	• •					-			
20.	0 0	2575.5	379.4	0.	2355	. 4	90.91	1686.2	11315.
		852.5	61.17	63.51	840			1.9136	13996.
		4370.3	344.77	497.83	+375	. 0	132.16	1.0000	1+5.1.
		2996.4	759.72	341.73	3000.	. 0	30.512	1312.3	1554.8
		3596.7	572.54	409.25	3600			-150.37	1553.1
		0.	179.33	1703.5		0.		12.011	0.
		6.	-22.53	391.20		С.	9.	16.000	0.
		48.051	4.5**	232.56	1.248			12.000	210.00
		25.030	3.54	.9989	2.996			12.000	75000.
		30.028	3.34.	7.0000	3.396	3	+.0300	12.000	109.00
		2240.	117.2	1.0081					
		62.10	19.37						
		5624.	10894.						
		15 31 .	8525.						
24.		2854.5	328.57			-			
24.	0 0	845.0	126.2	108.25	2827	-		1666.5	11951.
		4374.5	143.79	496.04	375.		25.444	1.3640	13051 .
		2999.8	149.43	340.03	3000			1.0000	14678.
		3599.4	172.15	408.31	3600.		108.26	-49.14	1593.7
		0.	-27.33	1741.9			0.	11.968	0.
		0.	30.30	415.37		· .	0.	16.000	0.
		48.005	.57'	230.14	1.24		1.2500	12.300	213.00
		25.002	.231	9909	2.99		3.0000	12.000	75330.
		30.005	.507	7.0000	3.999		0000	12.000	103.00
		25 95 .	137.85	.9963					103.00
		75.54	24.37	• , , , , ,					
		8067 .	1 3295.						
		2285.	9999.						

PAGE 20 PILOT	05001121	ION-ALLO	AF NOITAG	NAGE 1ENT	MODEL	
25.11 2756.4	294.97	с.	2530.6	93.19	1633.1	11342.
947.1	140.5	104.16	957.0	29.278	1.9320	19033.
4375.5	341.21	494.51	-3"5.0	130.64	1.0000	14743.
3000.5	47.27	339.31	3000.0	*3.587	1346.2	1329.9
3600.5	571.5	407.35	3500.0	107.50	91.79	13+5.6
0.	14.21	1753.8	0.	0.	11.982	0.
0.	19.53	457.46	0.	0.	16.000	0.
47.991	301	227.11	1.2502	1.2500	12,000	210.00
24.935	523	1.0002	3.0006	3.0000	12.000	75300.
29.936	520	7.0000	4.0006	* . 0 1 0 0	12.000	103.00
3153.	150.55	.5950	4.0000	•••	12.000	103.00
88.73	28.77	. 55: 0				
9492.	15617.					
25 93 .	11123.					
23 93 .	11125.					
32.00 2723.2	198.75	C.	2903.1	31.75	1630.9	11957.
983.8	117.23	84.07	992.3	29.539	1.8649	1:932.
4375.1	140.51	495.21	+375.0	130.70	1.0000	1+750.
3000.1	145.80	339.57	3000.0	19.520	1326.3	1344.0
3600.1	\$70.35	407.19	3600.0	107.54	81.09	1335.5
0.	79.35	1754.4	0.	0.	12.007	0.
0.	-6.5-	461.01	0.	0.	16.000	c.
47.998	141	226.66	1.25 00	1.2500	12.000	212.00
24.999	100	1.0000	3.0001	3.0000	12.000	75000.
29.999	103	7.0000	4.0301	0000	12.000	103.00
36 10 .	184.57	1.0001	4.0001	0000	12.000	103.00
101.77	37.12					
10897.	17922.					
3095.	12219.					
36.00 2751.9	329.50	0.	2513.8	\$2.53	1646.4	11921 .
957.9	102.43	78.08	346.4	29.729	1.8506	19013.
4374.5	341.71	495.C3	+375.0	131.20	1.0000	14735 .
2999.6	747.53	340.10	3000.0	89.952	1322.1	1772.7
3599.6	370.37	408.02	3600.0	107.96	5.46	1752.4
0.	51.97	1757.0	0.	0.	12.010	0.
0.	-11.51	443.18	0.	0.	16.000	0.
48.005	.533	227.73	1.2495	1.2500	12.000	210.00
25.003	.407	.9999	2.9996	3.0000	12.300	75000.
30.003	.371	7.0000	3.9396	0200	12.000	103.00
4065.	209.15	1.0025				
114.57	37.51					
12303.	20243.					
35 14.	13213.					

2.1

PAGE 21 PILOT	6400A0.	ON-ALLOC	THEFERNAP HOLTA	MODEL	
40.00 2803.3	325.72	0.	2815.3 54.20	1554.1 11	301.
927.2	107.25	94.51	925.5 27.3.9		354.
4374.5	342.45	496.08	4375.0 131.40		715
2999.7	749.31	340.19	7000.3 30.104		33.6
3599.7	571.41	406.18	3600.0 138.13		33.3
0.	11.3"	1762.0	0. 0.	12.001	0.
0.	-1.57	434.66	1. 0.	16.000	0.
48.204	373	228.26	1.2499 1.2500		2.00
25.002	.272	.9999	2.9397 3.0010		000.
30.002	.290	7.0000	3.93970110		3.00
45 22 .	230.37	1.0010	3.33370130	12.000 10	3.00
128.08	41.97	1.0010			
137 21.	22532.				
39 33 .	14120.				
44.00 2017.9	318.77				
		0.	2910.1 94.56		. 909 .
928.5	115.4.	90.00	932.8 27.355		359.
4375.0	142.30	495.85	4375.0 131.29		715.
3000.0	769.15	340.00	3000.0 30.026		55.8
3500.0	571.32	408.03	3600.0 108.03		51.1
0.	-7.71	1765.4	0. 0.	11.996	0.
0.	4.27	438.96	0. 0.	16.000	0.
43.000	025	227.97	1.25 00 1.2500		0.00
25.000	923	1.0000	3.0100 7.0000		.000
30.000	005	7.0000	4.03000130	12.000 10	3.00
4980.	253.51	.9964			
141.31	46.3				
15142.	24920.				
4357.	14940.				
45.00 2806.1	314.67	G.	2907.2 34.13	1646.9 11	919.
941.9	115.35	98.91	944.1 23.241	1.9657 13	352.
4375.1	141.7	495.71	4375.0 131.17	1.0000 1.	725 .
3000.1	747.87	339.91	3000.0 :3.3.7	1332.4 17	75.2
3600.1	571.17	407.91	3600.0 107.94	11.84 17	77.3
0.	1.05	1765.9	0. 0.	11.998	0.
0.	2.1.	444.05	0. 0.	16.000	0 .
47.999	175	227 . € 2	1.2500 1.2510	12.000 21	1.00
24.999	103	1.0000	3.0001 3.0010	12.000 75	000.
29.999	197	7.0000	4.01010100	12.000 10	3.00
54 38 .	? 75.5:	. 3954			
154.50	50.73				
16561.	27251.				
<b>4770.</b>	15679.				

PAGE	22 PILOT	ב כנים ה צם	TON-ALLOC	ATION MA	NESETENT	MONEL
52.	00 2798.7	116.2°	.2	2808.0	33.92	1647.0 11920.
,	345.3	-	86.31	3+4.8	23.364	1.8773 13057.
	+375.0		495.77	-375.8	171.19	1.0000 1.723.
	3000.0		335.€	3000.0	89.359	1330.0 1775.7
	3600.0		407.95	3500.0	107.95	8.75 1774.4
	2.		1765.7	0.	0.	12.001 0.
	j.	-1.11	443.53	3.	0.	16.000 0.
	48.000		227 . 6 0	1.25 00	1.2500	12.000 210.00
	25.000		1.0000	3.0100	3.0000	12.000 75000.
	30.000		7.2000	4.0100	4.0000	12.000 103.00
	58 95 .	293.5	1.0001	0 100	** 0 3 0 0	12.000 105.00
	157.67		1.0001			
	17978	29573.				
	5184.	15747.				
	21040	15.4				
56.	00 2803.0	318.30	0.	2809.4	34.09	1649.0 11915.
20.	941.4	111.51	85.84	940.0	28.242	1.876- 13050.
	4374.9		495.66	4375.0	131.25	1.0000 14724.
	2999.9		340.02	3000.0	20.201	1329.7 1755.4
	3600.0		408.01	3600.0	103.00	63 1765.2
	0.		1765.9	0.	0.	12.001
	ď.	-1.3*	441.61	0.	ű.	16.000 0.
	48.001		227.74	1.2500	1.2500	12.000 210.00
	25.000		1.0000	2.3999	3.0000	12.000 75000.
	30.000		7.0000	3.9999	+.0000	12.000 103.00
	5352.	322.71	1.0003	3.7777	+.0500	12.900 103.00
	180.35	59.59	1.0003			
	19395.	31910.				
	56 00 •	15953.				
		13931				
60.	00 2509.0		0.	2809 .4	3+.28	1649.8 11913.
50.	937.9		86.80	937.9	23.142	1.9798 19055.
	4375.0		495.66	4375.0	131.27	1.0000 1.722.
	3000.0		340.02	3000.0	20.314	1330.7 1753.1
	3600.0		408.02	3600.0	109.02	-3.22 1753.2
	0.	3:	1766.4	0.	0.	12.000 0.
	0.	0'-	440.77	0.	0.	16.000 0.
	48.000	.339	227.60	1.2500	1.2530	12.000 210.00
	25.000	. 9 2 9	1.0000	3.0000	3.0110	12.000 75000.
	30.000		7.0000	4.0000	+.0000	12.000 103.00
	58 10 .	345.5-	1.0001			1000 10000
	194.05					
	20813.	The second second				
	60 15 .	17501.				

PAGE	23	PILOT	960 303 - 1	ON-ALLOC	ATION MA	NASEMENT	MODEL	
64.	00	2810.0	118.30	G.	2808.7	34.70	1649.3	11914.
		938.5	113.40	37.35	939.1	29.156	1.0814	13055.
		+375.0	342.11	495.63	-375 .0	131.25	1.0000	1.723.
		3000.0	748.07	340.00	3000.0	30.002	1331.2	1765.8
		3500.0	\$71.21	408.00	3600.0	103.00	1	1755.3
		3.	-1.77	1766.7	C.	0.	11.999	С.
		0 •	.55	441.45	3.	0.	16. 300	0.
		48.000	012	227.75	1.25 00	1.2500	12.000	212.00
		25.000	000	1.0000	3.0000	3.0100	12.000	75000.
		30.000	007	7.0000	4.0000	4.0000	12.000	103.00
		7267 .	369.53	.9999				
		207.25	54.42					
		22232.	36575.					
		64 32 .	17997.					
68.	00	2508.3	317.5%	0.	2908.4	94.24	1648.8	11315.
		940.2	113.40	87.14	9+0.4	29.204	1.5806	13055.
		4375.0	3 42.05	495.02	L375.0	131.24	1.0000	1.724 .
		3000.0	147.99	339.99	3000.0	89.393	1330.9	1753.1
		3600.0	571.19	407.99	3600.0	107.99	1.54	1753.3
		1.	.1*	1766.7	0.	0.	12.000	0.
		0.	.22	442.04	0.	2.	16.000	0.
		48.000	01-	227 .71	1.2500	1.2500	12.000	210.00
		25.000	017	1.0000	3.0000	3.0000	12.000	75000.
		30.000	012	7.0000	0 10 0		12.300	103.00
		77 25 .	391.5=	.9999				
		220 .44	72.85					
		23650.	19905.					
		68 45 .	15 445.					
72.	00	2807.5	319.11	0.	2908 .6	34.22	1648.9	11915.
		94 0.5	112.39	86.82	940.4	29.215	1.8796	19054.
		4375.0	142.05	495.83	4375.0	131.24	1.0000	14724 .
		3000.0	747.90	340.00	3000.0	.3.336	1330.6	1767.3
		3600.0	171.13	407.99	3600.0	107.39	.92	1757.6
		0.	1.10	1766 .7	0.	0.	12.000	0.
		0.	17	441.95	0.	0.	16.000	0.
		48. 900	007	227.71	1.2500	1.2530	12.000	213.03
		25.000	. 107	1.0000	3.0000	3.0000	12.000	75000.
		30.000	331	7.0000	4.0000	4.0100	12.000	103.00
		8183.	+14.53	1.0000				
		233.53	77.25					
		25068.	·1237.					
		7262.	18851.					
	_							

PAGE	. 4	PILOT	0407.10.	ON-ALLOC	ATION MA	NASEMENT	MODEL	
76.35	1	2818.1	318.42	0.	2918.7	34.24	1649.1	11915.
	,	939.3	112.33	36.60	939 .7	29.198	1.8796	19055.
		4375.0	342.00	495.84	4375.0	131.25	1.0000	1.723.
		3000.0	748.33	340.00	3000.0	90.301	1330.6	1755.6
		3600.0	571.20	408.00	3500.0	108.30	22	1755.5
		0.	.5.	1766.7	0.	0.	12.000	0.
		0.	15	441.66	0.	0.	16.000	0.
		43.000	. 202	227.73	1.2500	1.2500	12.000	210.00
		25.000	.005	1.0000	3.0100	3.0000	12.000	75030.
		30.000	.005	7.0000	4.0000	0100	12.000	109.00
		8640 .	¥37.51	1.0000				
		246.92	81.5					
		26485 .	. 1559.					
		7677.	19219.					
30.00	)	2908.9	319.47	0.	2808.7	34.27	1649.2	11915 .
		939.5	112.35	\$6.93	939.5	29.186	1.3800	19355 .
		4375.0	142.03	495.84	4375.0	131.25	1.0000	1+723 .
		3000.0	749.01	340.00	3000.0	90.102	1330.8	1765.3
		3600.0	: 71.27	408.00	3600.0	108.00	41	1755.4
		0.	05	1766.3	0.	0.	12.000	0.
		0.	.01	441.59	0.	0.	16.000	0 •
		48.000	.000	227.74	1.2500	1.2500	12.000	210.00
		25.000	. 203	1.0300	3.0100	3.0000	12.000	75000.
		30.000	.007	7.0000	4.0000	+.0000	12.000	103.00
		90 99 .	+67.47	1.0000				
		260.02	86.00					
		279 04.	.5901.					
		8092.	19551.					
	•	· • • •						
84.00	)	280 8.8	518.37	0.	2808.6	34.26	1649 - 1	11315.
		939.7	113.07	36.99	939.7	29.190	1.3802	19055.
		4375.0 3000.0	148.09	495.83	4375.0	131.25	1.0000	14723.
		3600.0	571.20	408.00	3600.0	103.00	01	1755.8
		0.	13	1766.8	0.	0.	12.000	0.
		0.	.07	441.68	ű.	0.	16.000	0.
		48.000	007	227.73	1.2500	1.2500	12.000	210.00
		25.000	101	1.0000	3.0100	3.0000	12.000	75000.
		30.000	001	7.0000	4.0000	+.0000	12.000	103.00
		9555.	493.44	1.0000		,		
		273.21	90.50					
		29322.	¥\$232.					
		85 07 .	19952.					

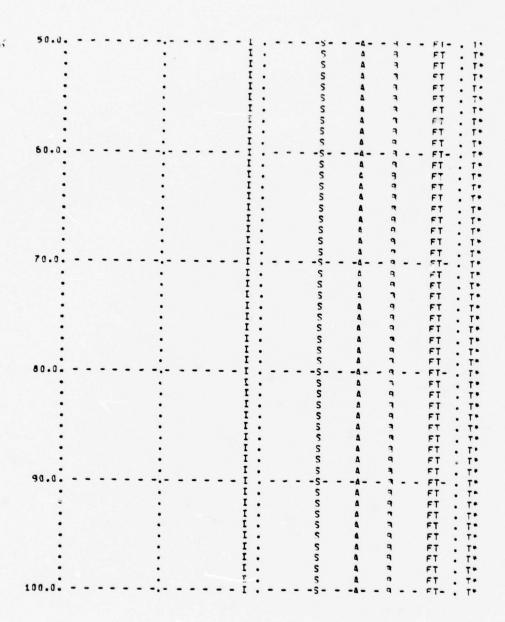
94GE 25	PILOT	25000011	ON-ALLOC	AT ION MA	MASEMENT	MODEL	
33.30	2508.6	319.27	0.	2808.6	94.26	1649.0	11315.
	939.9	117.07	36.95	939.9	29.136	1.3301	13055.
	4375.0	342.09	495.83	4375.0	131.25	1.0000	1+723.
	3000.0	743.00	340.00	3000.0	59.399	1370.8	1757.0
	3600.0	371.21	408.00	3500.0	108.00	.20	1757.0
	0.	.07	1766.8	0.	0.	12.000	0.
	0.	. 02	441.75	0.	0.	16.000	е.
	45.000	007	227.73	1.2500	1.2500	12.000	210.00
	25.000	102	1.0000	3.0000	3.0000	12.000	75000.
	30.000	302	7.0000	4.0000		12.000	109.00
	10013.	506.41	1.0000				
	286 .+0	94.92					
	30741.	50554.					
	39 23 .	20124.					
92.00	2808.5	319.22	0.	2808.6	84.25	1549.1	11915.
	939.9	117.01	86.91	939.9	29.196	1.8799	19055.
	4375.0	342.09	495.83	+375.0	131.25	1.0000	14723.
	3000.0	. 48.00	340.00	3000.0	90.000	1330.7	1755.9
	3600.0	571.20	408.00	3600.0	108.70	. 19	1755.9
	0.	.17	1766.8	0.	0.	12.000	0.
	.0.	27	441.73	0.	0.	16.000	0.
	45.000	.007	227.73	1.2500	1.2500	12.000	210.00
	25.000	.002	1.0000	3.0000	3.0000	12.000	75000.
	30.000	. 102	7.0000	4.0000	4.0000	12.000	103.00
	10470 .	129.33	1.0000				
	299.59	99.34					
	32159.	3 2895 .					
	93 39 .	: 0 37 0 .					
96.00	2808.5	318.33	0.	2308.7	34.26	1649.1	11915.
	939.8	112.99	86.92	939.8	28.194	1.3800	19055 .
	4375.0	342.03	495.83	4375.0	131.25	1.0000	14723.
	3000.0	. 48.03	340.00	3000.0	90.000	1330.8	1755.8
	3600.0	571.20	406.00	3600.0	109.00	04	1765.8
	0.	. 05	1766.8	0.	0.	12.000	0.
	0.	0?	441.69	0.	0.	16.000	0.
	48.000	.001	227.73	1.25 00	1.2500	12.000	210.00
	25.000	.001	1.0000	3.0100	3.0000	12.000	75000.
	30.000	.001	7.0000	4.0300	4.0000	12.000	108.00
	10929.	552.37	1.0000				
	312.79	. 03.75					
	33577.	35227.					
	9753.	20593.					

PAGE	26	PILOT	בזכעור כאפ	ON-ALLOC	ATION MA	NASEMENT	MODEL	
100.	00	2509.7			2818.6	94.26	1549.1	11915.
		939.8		36.63	939.8	29.193	1.9800	13055.
		4375.0	142.03	495.83	4375.0	131.25	1.0000	14723.
		3000.0	743.00	340.00	3000.0	90.000	1330.6	1755.8
		3600.0	571.27	408.00	3600.0		05	1755.8
		0.	0?	1766.8	0.	0.	12.000	0.
		0.	. 20	441.69	0.	0.	16.000	0.
		48.000	.000	227.73	1.2500	1.2500	12.000	210.00
		25.000	. 393	1.0000	3.0000	3.0100	12.000	75000.
		30.000	.000	7.0000	4.0000	4.0100	12.000	103.00
		11386.	575.31	1.0000		4.0300	12.000	103.00
		325.38	108.17					
		349 95 .	57553.					
		10165.	20795.					

PAGE 27 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

J09(1)=S J09(2)=I J08(3)=F J09(4)=9 J09(5)=A T0TF2R=T F0RSIZ=+

0.000T 4.300T 2.950T 3.540T	500T 1.0 320T 4.3 96FT 2.9	00 0T 1 4 34 CT 4 5 5 8 0T 3 5	.500T 2 .360T 4 .995T 3 .600T 3	.500T S .000T I .330T F .010T F .520T A .100T T*
	3. F I T	. T	A 9 FT A 9 FT A 9 FT .T S* S. *	S . T* S . T* S . T* S . T*
10.0: - T T	. B A F I . B S . S S	S I I A I A I A	. 9 = +	. HT . IF,SA IB
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			A. B FT* A 7 FT A 7 FT A 7 FT A 7 FT A 7 FT A 7 FT A 7 FT A 7 FT A 7 FT	
30.0		I S I S I S I S I S I S I S I S I S I S	-43-1E 4 3	- F*
40.0			4 9 FT 4 9 FT 5 9 FT	: T. T : T :
	: I		4 3 FT 4 3 FT 4 3 FT	. T.



PAGE 28 PILOT PRODUCTION-ALLOCATION MANAGEMENT HOSEL

TRNG (1) = 1	TRNG(2)=2	TRNG(3)=3	TRNG (4) = 4	TENG(5) -5	4547 - W

0.000 101.0		200.00		300.000	400.000	
840.000 870.0		900.00		930.000	960.000	
650.000 700.3		720.0		740.000	760.00	
500.000 5:0.1		540.00		560.000	580.00	
	007	1.5	307	1.600T	1.70	JT W
0.0.4 72			H -	,	-1	
.4 32	.=		. н	•	1 .	
.4 32	.5				1 .	
.4 32	.=		. 4		1 .	
.4 32	. 5		. W		1 .	
. 62	. 3	5 4	. H	1.		
	. 1	2 4.	W 3	5 .		
. 1			. W	24 3 5		
• 1		₩.		.23 5		24
•1		₩ ,		2. 3		45
10.01		- W -	?	,	- 34	45
• 1		W 2			34 .	45
•	. 12		•	. 35		34
	. 2	1.	. W	.3 5		34
. 2			. 1 .	4 43 5		
• 2				1W43 5		
. 2				. 431 5		14
. 2	•			. 43	1 .	15W
. 2	•			. 43	5 W1 .	
. 2	•				3 5 1 .	34,1W
20.02				,	345 -1H .	
. 2	•				3 51 H .	3+
• 2					3415 W .	
	. 2				145 W .	13
	. 2			_	3 5W .	34
	. 2			. 1	3 45 .	3+
	. 2			1 3	45 .	34
	. 2			1. 3	5 .	34 H
	. 2			1 . 43	5 .	44
	2			1 . W3	· .	34
30.0	2				-5	34
•	. 2			1. WT	5 .	34
	. 2			1 3	5 .	34 W
•	. 2			•1 7	5 .	34 W
	• *	•		. 1 43	5 .	34
	1			. 1 3	5 .	34 W
	2				45 .	34
	2 2 2				45 .	34
	4			. 13	5 .	34,5W
40.0	•			. 13	45 .	34
40.0				1 - 5	-W5	34
	• • •	1 '		. 13	45 .	
	. 2	•		. 1 3	W5 .	34
	•			. 1 3	W5 .	-
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				1	345			. 34
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60.0.	 ,-?		 	- 1	-345-	-	-	34
	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			1	3 45		-	34
	. 2			1	345			34
•	. 2			1	345			34
	. ?			1	345			34
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	. 2			ī	345			34
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	. 2			1	345		•	34
	. ?			i	345		•	34
70.0.	 ,-?		 	- i	-345-	_		34
	. 2		•	i	345	_	- •	34
	. 2 . 2 . 2 . 2		•	1	345		•	34
	. 2		•	i	345		•	34
	. 2		•	i	345		•	34
	. 2		•	1	345		•	34
	. ,		•	1	345		•	34
	. ?		•	1	345		•	34
	. ?		•	1	345		•	
	. 2		•	1	345		•	34
80.0.	 2	:	 	. 1	-345-			
	. 2	•	 •	1	345	-		34
	. 2 . 2 . 2 . 2	•	•	1	345		•	34
	. 2	•	•	1	345		•	34
	. ,		•	1	345		•	34
	. ?		•	1	345		•	34
	. ?	3 , 190	•	1	345		•	
	. ?	•	•	1	345		•	34
	. 2 . 2 . 2 . 2	•	•	1	345		•	34
	. 2		•	1	345		•	34
90.0.	 	'	 	_	-345-		•	34
	. 2	•	 	1	345	-	•	
	. ,	•	•	1			•	34
	. ,	•	•		345		•	34
	. 2	•	•	1	345		•	3+
	. ;	•	•		345		•	34
		•	•	1	345		•	34
		•	•	1	345		•	34
	. 2	•	•	1	345		•	34
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100.0.	 2	•	•	1	345		•	34
100.0.	 		 	1	-345-		٠.	34

11"

PAGE 29 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

PPEC=R UPT=G DSITE=C DCSIZE=D TPINS=% FOEFC=E TRNS=C=B

300.000 0.0007 1.400 .985	400.000 50 1.300T 1.700 .990	00.000 2.000f 2.00C .395	600.000 3.000T 2.300 1.000	700.000 R3 4.000T CD 2.500 % 1.307 E
.200 0.0R R R	.210 	.220	.230 E	.240 9 RG,30 . RG,30 . RG,30
₹ <b>₹</b> <b>6</b> •	. ac c x a c c c c c c c c c c c c c c c	0. R G. D R G. D	ξ % •	RG,22
10.05-	ς , χ , χ , χ G	a .	R.	. 0% 
	. 7 7 7. R 7 R DO . 7 R DC	3 .DC ? 9 DR 6 DC . S	E. E. E. a E. a	. RC, Ea
20.0	. P C C C C C C C C C C C C C C C C C C	. G xg x	E . a E . a E . a E . a	CD . CD% . CD . GD . CD, 53
30.0	. G R . G R . G R		a : a : a : a :	
	. G XR . G XR . G XR . GR . R G	C . C . C .	a E a E a E a E a E a E a E a E a E a E	. CD . CD . CD, RX . RGX, CD
40.0:	. R G (	c . c . c	3 E E	. CD,3% . CD,5% CD . CD
59.0	R 70 R 70 R 70 R 70 GR 70 GR 70	c	3 E E E E E E E E E E E E E E E E E E E	. 95,30 . 85,30 . 86,30 . 86,00 . 00
	GR %	?	a E	. 65

50.0	GR		. UU . CD . RG, CD . RG, CD . RG, CD . RG, CD . RG, CD . RG, CD . RG, CD . RG, CD
70.0	R R R P - R R R R R R R R R R R R R R R	. E E E E E E E E E E E E E E E E E E E	. RG, CD . RG, CD . RS, CD . RS, CD . RG, CD . RG, CD . RG, CD . RG, CD . RG, CD . RG, CD
80.0	 R -		. RS,000 . RG,000 . RG,000 . RG,000 . RG,000 . RG,000 . RG,000 . RG,000
90.0	R	5	RG,00 RG,00 RG,00 RG,00 RG,00 RG,00 RG,00 RG,00 RG,00 RG,00

PAGE 30 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

OFDSC(1) = 1 OFDSC(2) = 2 OFDSC(3) = 3 OFDSC(4) = 4 OFDSC(5) = 5

500T 	0.101T 0.100 0.000	.500T 100.000 20.000	1.000T 200.000 40.000	1.700T 1 300.000 2 60.000 345
	1 1 1 1	2 . 4 5	3	. 12345 . 12345 . 12345 . 12345
	i. : 1		2 5	3 . 24
10.0	2. 43	-54 -31		45
2 .	. 453 . 453	1	1	. 35
20.0	. 43 . 43 1 ? 431 -			. 45 . 45 45 . 13,45
	13 2 13 2 13 2			. 23,145 . 345 . 345
	13 2 31 2 31 2 3412			. 345 . 145 . 145
30.0	321 2 1 23 1 2 3 1		:	345 . 2345 . 345 . 345
	2 3 1 2 3 1 2 3 1 2 71	:		. 345 . 345 . 345 . 345
40.0:	?31 ?31 1			. 345 . 345 12345 . 12345
	1 1? 1?			. 12345 . 1345 . 1345 . 1345
	1?	:		. 1345 . 12345 . 12345 . 12345
50.0	i i i i		:	12345 . 12345 . 12345 . 12345

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/0.0	12345
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100.0	

PAGE 31 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

...

CRATIO(3)=1 OCRATI(3)=2 CFATIO(4)=3 OCRATI(4)=4 CRATIO(5)=5 OCRATI(5)=6

2.950	1.235	1.247	1 20.5	. 250	4 355 43
3.940			1.245	1.250	1.255 12
0.0.					
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PAGE 32 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

## CHANGES FOR RERUN -

ORIGINAL	44	9.100	0.000	0.000	0.000	0.000
PRESENT	44	1.000	1.000	1.000	1.000	1.000

PAGE 33 PILOT PROMUTION-ALLOCATION MANAGEMENT MODEL

TIME	103	TRUT	NESO	CEDROS	117	MIND	254538
	,	,	2	,	,	TPINS	TOTFOR
	3		3	3	,	CAP	120-03
	4	4		4	1.	TONEED	33125
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	HEDD	DETST	PATT	CRATIO	223471	ATJ	140135
	,	,	PREC	2	2	2	2
	ī	7	TRNGFC	3	3	3	3
		4	FOEFC		ì		_
	5	5	TOFL	5		5	5
	SCOST	2005-	TRAV	,		,	
	PCOST	4005-					
	TOOST	rorgas					
	UCOST	00051					
		0 /3					
E-01	5-00	E-00	E-00	E-00	5-00	5-00	E-00
01	E-00	5-00	E-00	E-00	5-00	E-00	=-00
	5-00	E-00	E-00	5-00	5-30	E-00	E-00
	5-00	5-00	E-00	5-00	E-00	E-00	E-00
	E-00	5-00	E-00	E-00	E-00	E-00	E-00
	E-00	E-00	E-00	E-00	E-00	E-00	E-00
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	E-00	E-00	E-03	E-00	E-00	E-00	= 03
	E-00	5-03	E-00	E-00	E-00	E-00	E-00
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	€ 05	E 05					
	5 06	E 05					
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	640.0	54.5	52.80	5.0.0	12.100	1.2900	13055 .
	4375.0	859.0	452.08	4375.0	37.50	1.0000	150+0.
	3000.0	3 2 . 02	310.00	3000.0	50.00	1185.9	1213.2
	3600.0	520.80	372.00	3500.0	72.00	0.0	1203.2
	0.	3.2	1203.2	0.	0.	12.300	0.
	3.	0.00	300.80	0.	0.	16.000	0.
	48.000	00	211.12	1.25 00	1.2500	12.000	210.00
	25.000	22	1.0000	3.0000	3.0010	12.000	75000.
	30.000	00	7.0000	+.0000	4.0000	12.000	103.00
	0.	0.00	1.0000		5500	12.000	103.00
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PAGE	34 PILO	ר פפחחשפי	ION-ALLOC	THEFETCHEM NOITA	MODEL
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	4375.		452.08	4375.0 175.00	1.0000 15140.
	3000.		310.00	3000.0 120.00	1196.9 1203.2
	3500.1		372.00	3600.0 144.00	.0 1203.2
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	0.		300.00	0. 0.	16.000 C.
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	25.00		1.0000	3.0100 3.0100	12.000 /5030.
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	12.3		1.0000		
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	283				
	00 2436.	9.55	0.	2550.2 89.99	1442.0 12555.
	1126.	+37.45	535.18	1539.9 41.515	2.5511 19048.
	4200.0		646.67	4375.0 155.11	1.0885 15115.
	2579.	595.77	443.61	3000.0 106.35	2158.8 2885.9
	3454.		533.30	3500.0 127.59	1499.9 3735.8
	0.		1835.9	0. 0.	11.137 0.
	0.		721.48	0. 0.	16.000 0.
	50.000		218.86	1.2000 1.2500	12.000 211.00
	26.04		.9559	2.3737 3.0000	12.000 75000.
	31.25		7.6201	3.8386 +.0000	12.000 103.00
	903		.9740	3.3000 4.3030	12.000 103.00
	24.30		• 31 . 0		
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12.			c.	2359.1 58.13	1425.4 12939.
	1774.		239.31	1953.8 55.442	1.9143 17433.
	4095.		744.86	4375.0 151.02	1.1397 15208.
	2808.		510.70	3000.0 103.56	2106.1 3395.9
	3371.0		611.25	3630.0 124.34	1479.5 3433.1
	0.		1958.6	0. 0.	11.262 0.
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	51.23		220.63	1.1700 1.2500	12.000 210.00
	26.70		.9362	2.3082 3.0100	12.000 75000.
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PAGE 35 PILOT	≥800/J2.	TON-ALLOCATI	ON MANAGEMENT	MODEL
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1636.9	97.92	37.54 15	04.1 57.788	1.5628 17733.
4232.6	1095.1	635.09 43	75.0 157.91	1.0722 14702.
2893.2	354.35	441.38 30	00.0 112.12	1624.9 2721.9
3497.0	658.71		00.0 135.42	583.8 2591.2
0.	1115.1	2007.3		
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0.	-132.31	680.47	0. 0.	16.000 0.
<b>49.615</b>	142.47		2093 1.2500	12.000 210.00
25.905	104.77		9952 3.0000	12.000 75000.
30.893	102.35	7.5053 3.0	8956 4.0000	12.000 103.00
1749.	125.17	1.0799		
47.73	19.5			
5085.	8461.			
1436.	5953.			
20.00 1639.0	+74.5	0. 22	+2.3 55.58	1849.4 12020.
1156.0	21.2+		45.1 +5.351	1.6502 13500.
4388.4	1023.1			
			75.0 178.27	1.0000 14253.
3012.5	319.32		00.0 122.37	1334.7 1907.7
3601.8	314.50		00.0 146.31	-284.8 1321.0
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PAGE	37 PILO1	650000-	TON-ALLOCAT	NCI	MANAGEMENT	HODEL	
40.0	0 2125.4	106.41	0.	2228	1 95.35	1772.5	12157.
	1221.1			192.		1.3231	19935 .
	4372.5			375.		1.0226	14335 .
	299 5 . 3			.000.		1457.4	2725.1
	3598.3			1500.		-75.5	2232.1
	0.		2278.6		. 0.	12.023	0.
	0.		556.51		. 0.	15.000	0.
	48.025			1.249		12.000	213.03
	25.014			. 998		12.000	75000.
	30.014						
				1.998	4.0000	12.000	103.00
	4459.		1.0080				
	132.03						
	14093.						
	4923.						
44.0				2219		1791.9	12137 .
	1157.5			152.		1.8908	19122.
	4374.0			375		1.0189	14357.
	2999.2			5000.		1482.2	2133.6
	3599.2			5600.		-103.6	2195.9
	0.	-54.+	2300.5	(	1. 0.	11.993	0 .
	0.	4.32	547.14	0	0.	16.000	0 .
	49.011			.249	1.2500	12.000	210.00
	25.006	. 75	.9998	.919	2 3.0100	12.000	75000 .
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	4375.7	1025.1	539.38	.375	0 175.02	1.0293	14400 .
	3000.5	314.63	369.81	5000	0 120.01	1493.7	2293.2
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	47.99			1.25		12.000	210.00
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	5375		.9955		25 0300	12.000	103.00
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52.00	PAGE	33	PILOT	050000	ION-ALLOC	ATION 4	4N83E1ENT	MODEL	
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4374.5 1025.2 539.85 4375.0 175.12 1.0293 14414. 2999.6 513.93 370.21 3000.0 120.08 1473.1 2293.2 3599.5 521.51 444.16 3500.0 1+4.10 -15.1 2235.0 0. 29.1 2301.0 0. 0. 12.007 08.37 573.31 0. 0. 16.000 0. 48.005 .54 244.24 1.2498 1.2500 12.000 210.00 25.003 .41 .9999 2.9996 3.0000 12.000 75000. 30.003 .33 7.2053 3.9996 4.0000 12.000 103.00 6747. +50.55 1.0022 202.26 81.42			1230.5	154.55	118.88	1222.2	49.250	1.8536	13043.
2999.6 513.33 370.21 3000.0 120.08 1473.1 2233.2 3599.5 521.51 444.16 3500.0 1+4.10 -15.1 2235.0 0. 29.1 2301.0 0. 0. 12.007 0. 0. 88.005 .54 244.24 1.2498 1.2500 12.000 210.00 25.003 .41 .9999 2.3396 3.0000 12.000 75000. 30.003 .33 7.2053 3.9396 4.0000 12.000 103.00 6747. +50.55 1.0022 202.26 81.42 21649. 36778.			4374.5	1025.2					
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6747. +50.55 1.0022 202.26 81.42 21643. 36778.									
202.26 81.42 21643. 36778.						3.9396	4.0000	12.000	103.00
21647. 36778.					1.0022				
7648 19547				36778.					
1045. 1114.			7645 .	19547.					

11.

PAGE	19 PILO	PRODUCT	ON-ALLOC	ETTON MANASE	JECOM THE
64.	00 2230.0	282.30	с.	2215.0 99.	.34 1750.6 12135
	1210.1		124.57	1209 .9 .8	+81 1.8798 13090
	4374.7	10 25 . 3	539.03	4375 .0 175	.26 1.0275 14416.
	2999.		370.25	3000.0 120.	
	3599.9		444.27	3600.0 1+4.	.22 -29.9 2275.6
	0.		2305.5	0.	0. 11.999
	0.		568.70	0.	0. 16.000 0.
	48.003		244.51	1.2499 1.23	
	25.002		.9999	2.9398 3.00	
	30.002		7.1923	3.999700	000 12.000 103.00
	7204.		1.0004		
	215.33				
	23160.				
	91 99 .				
• • •					
68.			0.		.+4 1754.6 12196
	1215.8		129.16	1220.6 63.5	
	4375.1		539.61	4375.0 175.	
	3000.1		370.00	3000.0 120.	
	3600.1		444.04	3500.0 144.	
	0.		2308.3	0.	0. 11.996 0.
	0.		574.35	0.	0. 16.000 0.
	47.999		244.02	1.2500 1.25	
	24.999		1.0000	3.0001 3.0	
	29.999		7.2082	4.0301 4.00	000 12.000 103.00
	7662.		.9990		
	230 .+0				
	24672,				
	87 43 .	7. 5. 5. 5.			
	· · · · ·			• • • • • •	
72.			0.		.50 1748.6 12208.
	1230.5		128.25	1233.5 -9.1	
	4375.2		539.39	4375.0 174.	
	3000.2		369.85	3000.0 119.	
	3600.2		443.86	3500.0 143.	
	0.		2307.4	0.	0. 11.998 0.
	0.		580.07	C.	0. 16.000 0.
	47.937		243.€0	1.2501 1.25	
	24.998		1.0001	3.0002 3.00	
	29.999		7.2242	4.0002 4.00	000 12.000 103.00
	8120.		.9992		
	244.41				
	25180.				
	9281.	20031.			

PAGE	40 PILOT	PR00UCT	ION-ALLOCATIO	N MANASEMEN	MODEL
75.	00 2200.5	259.41	C. 221	7 7 47 26	471.0 0 42202
(3.	1235.4			3.7 47.96	1748.9 12209.
				4.1 49.387	1.5773 13053.
	+375.1			5.0 174.59	1.0319 1.423.
	3000.0			0.0 119.93	1478.4 2313.3
	3500.0			0.0 143.31	12.0 2317.6
	0.		2305.6	C. O.	12.001 0.
	3.		579.81	0. 0.	16.000 0.
	47.999			500 1.2500	12.000 210.00
	25.000	04	1.0000 3.0	0000 3.0000	12.000 75000.
	30.000	0-	7.2235 4.0	100 0000	12.000 103.00
	85 77 .	570.00	1.0002		
	258 .39	104.43			
	27684.	+7714.			
	98 20 .				
80.	00 2205.6	274.10	C. 221	4.4 38.23	1752.7 12202.
	1229.2			6.9 49.173	1.8755 13058.
	4374.9		539.63 437	5.0 175.01	1.0305 14415.
	2999.9			0.0 120.01	1477.6 2305.4
	3599.9			0.0 120.01	-1.9 2303.3
	0.		2305.2	0.0 1.4.01	12.002 0.
	0.		576.35		
	48.001			0. 0.	
				500 1.2500	12.000 210.00
	25.001			399 3.0000	12.000 75000.
	30.001			9 99 00000	12.000 108.00
	90 35 .		1.0006		
	272.40				
	291 89.				
	10362.				
84.	00 2216.6	275.55	0. 221	4.0 98.70	1754.5 12136.
	1223.1	152.17	125.15 122	2.7 49.345	1.8792 19058.
	4374.9	1025.	539.68 437	5.0 175.07	1.0298 14412.
	2999.9	314.12	370.07 300	0.0 120.05	1479.0 2293.5
	3599.9	521.63	444.07 360	0.0 144.06	-7.9 2233.3
	0.	-2.5	2306.2	0. 0.	12.000 0.
	0.	4:	574.62	0.	16.000 0.
	48.001	. 10	244.04 1.2	500 1.2500	12.000 210.00
	25.001			399 3.0100	12.000 75000.
	30.001			959 4.0000	12.000 133.00
	94 92 .		1.0002	, , , , , , , , , , , ,	121000 133100
	286 .43				
	305 95 .				
	109 07 .				

PAGE +1	PILOT	030JUC-	ION-ALLOCATIO	N MANAGEMENT	MODEL
36.00	2219.7	273.71		3.4 99.90	1753.3 12200.
	122 3.5	157.95		4.6 49.947	1.8322 19070.
	4375.0	1035.3		5.0 175.03	1.0303 14413.
	3000.0	3107		0.0 120.12	1480.1 2302.3
	3600.0	3 21.5		0.0 1.4.02	-3.0 230+.0
	0.	-6.7	2307.0	0. 0.	11.999 (.
	0.	1.09	575.71	0. 0.	16.000 0.
	48.000	02	243.94 1.2	500 1.2500	12.000 210.00
	25.000	01	1.0000 3.0	100 3.0000	12.000 75000.
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## PAGE 42 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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PAGE 43 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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PAGE 44 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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PAGE 45 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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PAGE +6 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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PAGE 47 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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20.0.			54.5	2-1 455
•			543	21 . 46
•	•		5 3	12 . 346
			534	1 2 . 46
			34	1 2 . 35,45
			34	12 . 35.46
			34	
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•		•	3	1 . 12,3456
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	하고 않아 아무리 하는데 얼마 없는데 그 것이다.		3	21 . 3455
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			3	1 . 12,3456
			3	1 . 12,3456
			3	1 . 12,3456
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			3	1 .	12,3+56
		•	3	1 .	12,3456
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		•	3	. 1	12,3456
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70.0		•	3	1 .	12,3456
70.0	-,		-3	-1	12,3456
	•	•	3	1 .	
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80.0	-,		-?	-1	12,3456
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90.0	-,		-3	-1	12,3456
			3	i .	12,3456
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			1		12,3456
			7	1 .	12,3456
		Server many to the	•	1 .	12,3456
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			3	1 .	12,3456
100.0		•		1 .	12,3456
			-5	-1	12,3456

PAGE \$8 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

245

CHANGES FOR PERUN -

ORIGINAL H4 0.000 0.000 0.000 0.000 0.000 PRESENT H4 1.500 1.500 1.500 1.500

PAGE 49 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

TIVE	2 3 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	79N5 2 4 9F3S7 2 3 4 4 RCOST 4COST FOTCOS RCOST	PATT PRFC TRNGFC TOSEC TOEL TRAV	OFORCE 2 3 4 5 CRATIO 2 3 4 5	2 7 2 2 2 3 3 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	TPINS CAP TOMSED FORCE ATJ 2	3 4
5-00	E-00	5-00	E-00	5 - 00	E-00	5-00	E-00
	E-00	E-37	E-00	E-00	E-00	E-00	E-00
	E-00	5-00	E-00	=-00	E-00	E-00	₹-00
	E-00	E-00	E-00	E-00	E-00	5-00	5-00
	E-00	E-07	E-00	€-00	E-00	E-00	E-00
	E-00	5-00	E-00	5-00	E-00	E-00	E-00
	E-00	E-00	E-00	E-00	E-00	E-00	E-00
	E-00	E-00	E-03	E-00	5-00	E-00	€ 03
	E-00	5-00 5-00	E-00	5-00	E-00	E-00	5-00
	E 05	5 05	E-00	E-00	5-00	5-00	€ 03
	E 06	E 05	E-00				
	E 06	F 05					
	E 05	E 03					
0.00	3425.0	351.32	c •	3425.0	58.50	1540.8	11515.
	540.0	69.5	52.80	5+0.0	12.300	1.9800	13055.
	4375.0	859.1	452.1	4375.0	37.50	1.0000	150+0 .
	3000.0	582.00	310.00	3000.0	50.00	1136.9	1203.2
	3600.C	520.80	372.00	3600.0	72.00	0.0	1203.2
	0.	0.7	1203.2	0.	0.	12.000	0.
	0.	0.00	300.80	0.	0.	16.000	0.
	48.000	07	211.12	1.2500	1.2500	12.000	210.00
	25.000	00	1.0000	3.0000	3.0000	12.000	75000.
	30.000	0.00	7.0000	4.0000	4.0000	12.000	103.00
	0.00	0.00	1.0000				
	0.00	0.00					
	0.	0.					
		· · .					

PAGE	50 PILOT	. במטחמב	ION-ALLO	CATION "	MANASEMENT	MODEL	
4.	11 3425.0	353.92	с.	3425.0	171.25	1540.9	11515.
	640.0	64.5-	52.80	5+0.0		1.9800	
	4375.0		452.1	+375.0		1.0000	
	3000.0		310.00	3000.0		1186.9	
	3600.0		372.00	3600.0		.0	
	0.		1203.2	0.		12.000	
	o.		300.80	0.		16.000	
	48.000		211.12	1.25 00		12.000	
	25.000		1.0000	3.0000		12.000	
	30.000		7.0000	4.0 100		12.000	
	453.		1.0000	4.0 100		12.000	103.00
	12.33		1.0000				
	1325.						
	283.						
8.			0.	2204 .8	100.93	1403.8	13003.
٠.	1242.4		860.81	2028.1		2.8478	
	4068.1		778.9	+375.0			
	2791.3		532.60	3000.0		1.1538	
	3341.3					2618.6	
			646.30	3600.0		2132.2	
	0.		2114.3	0.		10.560	
	0.		865.67	0.		16.000	
	51.621		219.55	1.1623		12.000	
	26.569		.9295	2.7913		12.300	
	32.323		9.07 6 8	3.7126	4.0000	12.000	103.00
	897.		.9558				
	24.21						
	25 11 .						
	560.						
12.			0.	1993.0		1353.1	
	2086.4		520.99	2436 . 1		2.0352	
	3833.6		988.0	4375.0		1.2123	
	2631.7		675.09	3000.0		2999.6	
	3151.1		815.55	3500.0		2251.5	
	0.		2258.9	0.		10.471	
	0.		988.87	J.		16.000	
	54.779		215.80	1.0953		12.000	
	28.499		.8762	2.5317		12.000	
	34.274		8.4862	3.5012	0000	12.000	103.00
	1307.		1.0103				
	35.08						
	38 17 .	5182.					
	911	5755					

PAGE	51 PILOT	250,0,101	ION-ALLOC	ATION 44	NAGE4ENT	400 EL	
16.	00 917.7	.00		1390.5	+2.51	1574.8 11929	
	2078.3	198.31	190.53	2354.0	3557	1.7578 13375	
	3877.5	927.	953.5	4375.0	13 2 . 0 2	1.1653 14919	
	2651.5	76.5	660.19	3000.0	123.10	2575.3 3653.	
	3207.3	107.54	770.62	3530.1	145.30	1239.3 3599.	
	0.	977.7	2300.5	0.	1.	10.882	-
	0.	-24.27	887.15	0.	0.	16.000 0	
	54.157	197.71	245.62	1.1079	1.2500	12.000 210.0	
	28.286	349.50	.8871	2.5515	3.2010	12.000 75030	
	33.673	392.70	8.1573	3.5637	1.0000	12.000 103.0	
	1709.	146.0.	1.0838	3.7031	5500	12.000 105.0	U
	46.59	21.22	1.0000				
	5003.	8438.					
	1483.	5923.					
							_
20.0	0 649.3	22.53	c.	1539.2	32.25	1866.8 12+50	
	1635.1	80.45	41.58	1475.4	21.220	1.6320 17356	
	4224.9	1252.5	674.6	4375.0	209.96	1.0669 1.030	
	2587.6	393.5	470.27	3000.0	143.43	1727.7 2555.	
	3494.1	759.4	541.11	3500.0	173.56	117.8 2525.9	
	0.	993.1	2408.1	0.	0.	11.799	-
	0.	-159.70	667.14	0.	9.	16.000 0	
	49.705	150.03	278.48	1.2071	1.2500	12.000 210.0	
	25.974	112.4	.9664	2.3875	3.0000	12.000 75000	
	30.910	105.95	7 . 46 8 0	3.3823	+.0000	12.000 109.00	
	21 24.	187.35	1.0826				
	60.44	27.41					
	6353.	11747.					
	2285.	8 E 35 .					
							-
24.	1516.2	\$75.0°	0.	1732.5	77.51	1985.4 12131	
	1191.7	104.31	117.21	1155.7	50.999	1.8222 13917	
	4386.8	1097.0	564.1	4375 .0	224.5F	1.0171 13353	
	3014.7	376.77	381.13	3000.0	154.32	1537.9 2171.	4
	3596.2	65 3.73	475.50	3600.0	134.38	-439.0 2159.0	6
	G.	215.7	2598.6	٥.	0.	12.658 0	
	0.	-35.01	542.85	0.	0.	16.000 0	
	47.871	-11.73	275.13	1.2534	1.2500	12.000 210.01	)
	24.378	-14.5	1.0021	3.0147	3.0100	12.000 75000	
	30.032	7.51	7.1200	3.9958	0200	12.000 103.01	0
	2565.	218.03	.9895				
	76.04	34.10					
	5004.	14051.					
	3163.	10 749.					
							-

PAGE	52 PILOT	050 Jul. 2	ION-ALLOCATIO	N MANASEMENT	HODEL
28.	00 1915.7	215.07	C. 158	8.4 95.99	1879.2 12331.
	125 0. 7			6.2 12.556	2.0775 13134.
	4364.8	1115.3	589.9 437		1.0598 1.320.
	2991.7			0.0 149.90	1720.2 2593.2
	3595.5		482.10 363		
	0.		2751.5	0. 0.	11.875 0.
	0.		649.56	0. 0.	16.000 0.
	48.112			471 1.2500	12.000 210.00
	25.059			917 3.0000	12.000 75000.
	30.038			9500000	12.000 103.00
	3024.		.9873		
	91.50				
	95 91 .	15992.			
	38 95 .	11934.			
32.	00 1508.0	97.0	C. 165	1.4 73.79	1747.7 12325.
	1584.4	311.75	229.18 165	0.0 77.527	1.9776 15370.
	4381.0		575.9 437		1.1133 1.276.
	3004.3		394.67 300		1675.0 3133.3
	360 3. 3			0.0 176.32	411.6 3185.9
	0.		2774.3	0. 0.	11.951 0.
	0.	65.55	783.32	0. 0.	15.000 0.
	47.935		253.78 1.2		12.000 210.00
	24.964			043 3.0000	12.000 75000.
	29.973			036 +.0000	12.000 103.00
				030 +.0000	12.000 103.00
	3481.		.9813		
	106.05				
	11276-	19531.			
	4485.	13157.			
36.			0. 166		1753.6 12630.
	1706.9			4.5 33.679	1.9451 13554.
	4375.7		578.9 437		1.1149 14323.
	3000.8			0.0 147.11	1614.9 31+3.4
	3600.7	665.32	476.24 360	0.0 176.52	371.4 3120.0
	0.		2748.€	0. 0.	12.023 0.
	0.	-22.30	787.35	0. 0.	16.000 0.
	47.992	71	254.21 1.2	502 1.2500	12.000 213.00
	24.993	" 3	1.0002 3.0	008 3.0000	12.000 75000.
	29.935			007 4.0000	12.000 108.00
	39 31 .		1.0078		
	119.37				
	127 83 .				
	5075				
	2. 2. 2. 2. 2. 2				

PIGE	53 PILO	כניר הגם זכ	TOM-ALLO	CATION 4	ANGEMENT	MODEL
40.	00 1337	9 273.7		1663 .4	55.74	1840.4 12503.
	1582.		100		75.324	1.7956 13779.
	+371.			-375.0	213.07	1.0641 1.172.
	2997				1+9.52	1592.2 2340.7
	3597				179.47	+2.5 2730.6
		. 771.		0.	0.	12.043 0.
		54.3			0.	16.000 0.
	43.04				1.2500	12.000 210.00
	25.02				3.0100	12.000 75000.
	30.03				+.0300	12.000 103.00
	437					
	134					
	14311					
	57 49	. 1=324				
44.	JO 1633.	3 278.6	0.	1661.2	82.37	1896.2 12331.
	1427.				71.958	1.8473 19049.
	4371.				220.45	1.0636 14142.
	2997				151.16	1615.5 2535.2
	3597			The second second	181.41	-152.8 2522.4
		27.			0.	12.011 0.
	(	20.7	659.04	0.	. 0.	16.000 0.
	48.0	1 7.7			1.2500	12.000 210.00
	25.03					12.000 75300.
	30.02					12.000 103.00
	48 3	01.3				
	149 .:					
	1590	. 27825				
	646	. 15715				
48.	03 1753.	.0 245.9	. 0.	1541.1	89.57	1879.6 12+07.
	1409	.0 223.2	132.14	1431.6	79.784	1.9199 19153.
	4374	5 1111.	584.4	4375.0	219.77	1.0705 140+8.
	2999	.8 392.9	400.73	3000.0	150.70	1648.2 2705.1
	3599	7 573.9	480.95	3500.0	190.94	-90.6 2730.4
	(	1?1.	2821.0	0.	0.	11.977 0.
	(	22.5	676.27	0.	0.	16.000 0.
	48.00			1.2499	1.2500	12.000 210.00
	25.00			2.9198	7.0000	12.000 75000.
	30.00	03 .3	7.4936	3.9996	4.0000	12.000 103.00
	5292					
	164 .		1			
	175 30					
	716	17 215				

PAGE	54	PILOT	יז בויר פאם	TON-ALLO	ATION M	ANASEMENT	HODEL	
52.	23	1577.3	193.45	с.	1534.3	93.57	1835.1	12437.
		1496.2	246.51	189.94	1521.6	14.544	1.9204	19337 .
		4375.9	1107.0	562.1	4375.0	213.06	1.0873	14131.
		3001.4	179.53	399.07	3000.0	149.53	1650.3	2973.3
		3601.2	671.5.	479.20	3500.0	179.42	58.2	2335.7
		0.	-43.0	2827.5	0.	0.	11.980	0.
		0.	25.41	715.32	G.	0.	16.000	0.
		47.980	-1.31	258.51	1.2505		12.000	210.00
		24.999	-1.3	1.0004	3.0014	3.0010	12.000	75000.
		29.990	-1.2=	7.6113	4.0014	4.0000	12.000	109.00
		5751 .	¥72.14	.9936				
		179.32	83.05					
		19136.	33436.					
		7814.	18011.					
	-							
56.	0 0	1562.0	184.21	0.	1641.0	77.56	1820.9	12532.
		1556.5	237.77	173.12	1557 .4	77.383	1.8803	13338.
		4376.1	1105.=	581.8	4 37 E . 0	217.56	1.0927	1.173.
		3000.8	3 77 . 81	398.93	3000.0	149.18	1632.7	2925.8
		3600.8	570.41	478.84	3600.0	179.01	108.9	232+.0
		0.	79.1	2815.7	0.	0.	12.002	0.
		0.		731.71	0.	0.	16.000	0.
		47.988	-1.79	257.62	1.2503	1.2500	12.300	213.00
		24.993	31	1.0002	3.0008	3.0100	12.300	75000.
		29.993	97	7.6488	4.0109	0000	12.000	133.00
		62 08 .	509.92	.9988				
		193.92	00.00					
		20712.	35155.					
		8451 .	18720.					
	-							
60.	00	1552.9	211.51	0.	16+6.5	77.51	1340.8	12499.
		1538.5	? 11. 27	150.74	1523.5	75.793	1.8501	13335.
		4374.4	1105.3	583.1	4375.0	218.35	1.0855	14145.
		2999.5	378.77	399.86	3000.0	149.72	1621.4	2355.5
		3599.6	571.1	479.71	3600.0	179.68	32.2	2340.7
		0.	93.5	2808.5	u.	0.	12.013	0.
		0.	-14.94	713.87	0.	0.	16.000	0.
		48.005	• 5 5	259.16	1.2498	1.2500	12.000	210.00
		25.004	.47	.9999	2.9996	3.0000	12.000	75000.
		30.003		7.5988	3.9996	4.0000	12.000	109.00
		5564.	547.53	1.0034				
		208.55	97.10					
		22283.	35909.					
		9108.	19 755.					
	-							

PAGE 55	PILOT	- 13،000	ION-ALLOC	AM NCITA	NAGEMENT	MODEL	
64.33	1624.8	234.22	с.	1644.9	91.42	1861.9	12456
	1490.5	206.35	160.08	1+90.8	74.593	1.9547	13052
	4373.9	1109.2	564.1	4375.0	213.18	1.0779	14131.
	2999.2	380.4"	400.54	3000.0	150.29	1625.2	2773.4
	3599.2	572.33	480.50	3500.0	190.36	-42.4	2771.6
	0.	20.1	2814.0	0.	0.	12.007	0 .
	0.	-9.71	694.85	0.	0.	16.000	0 .
	48.012	1.09	260.E7	1.2497	1.2500	12.000	210.00
	25.007	.91	.9998	2.9392	3.0000		75030
	30.306	.75	7.5456	3.9391	4.0000	12.000	103.00
	7120 .	584.30	1.0028				
	223.35	104.1					
	23870 .	+1587.					
	97 85 .	19956.					
68.00	1676.5	231.51	0.	1539.5	94.02	1362.9	12451
	1472.6	215.91	170.03	147 € . 1	73.787	1.8862	19098
	4374.7	1109.5	583.9	4375.0	219.21	1.0778	1.031
	2999.8	381.00	400.38	3000.0	150.31	1634.7	2777 .6
	3599.7	672.71	480.44	3600.0	130.38	-41.3	2732.3
	0.	-37.7	2823.5	0.	0.	11.996	0.
	0.	3.50	694.40	0.	0.	16.300	0 .
	48.004	.3:	260.48	1.2499	1.2500	12.000	210.00
	25.002	. 25	.9999	2.9198	3.0000		75000
	30.002	.2"	7.5443	3.9997	+.0000	12.000	103.00
	7573.	520.3	.9997				
	238 .28	111.21					
	25471.	+4430.					
	10461.	20493.					
72.00	1565.5	215.99	0.	1536 .7	93.26	1850.6	12475
	1491.6	225.25	175.06	1499.6	74.552	1.8930	13037
	4375.4	1109.3	583.2	4375.0	213.72	1.0824	1+111
	3000.3	190.25	399.87	3000.0	149.98	1638.0	25 23 . 6
	3600.3	572.1-	479.53	3600.0	179.97	4.3	2331 . 1
	0.	-29.0	2826.8	0.	0.	11.993	0.
	0.	3.05	705.89	۲.	0.	16.000	0 .
	47.995	44	259.54	1.2501	1.2500	12.000	210.00
	24.937	37	1.0001	3.0103	3.0100	12.000	75000.
	29.995	30	7.5765	4.0003	4.0000	12.000	103.00
	80 35 .	355.70	.9981	4.0003	4.0000	12.000	133.00
	253 .14	118.29	. 5501				
	27071.	47253.					
	11124.	20977					
		2097					

PAGE	56	PILOT	650000:	ION-ALLO	CATION 4	ANASEMENT	MODEL	
76.	0.0	1624.5	203.50	0.	1539.2	91.31	1842.3	12+31.
		1513.8	225.17	171.86	1516.4		1.8838	19054 .
		4375.4	1107.7	582.9	4375.0		1.0852	1+130
		3000.3	379.30	399.68	3000.0		1634.1	2851.7
		3600.3	671.57	479.67	3600.0		29.6	2553.3
		0.	9.5	2323.7	0.		11.999	0.
		0.	2.5	712.93	0.		16.000	
		47.995	4-	259.03	1.2501		12.000	210.00
		24.997	-, 77	1.0001	3.0003			
		29.997	72				12.000	75000.
				7.5962	4.0004	4.0000	12.000	103.00
		8494.	593.62	.9991				
		267.30	125.34					
		28661.	50021.					
		11773.	21412.					
		• • • •						
30.	0.0	1614.6	214.02	0.	16+0.5		1846.0	12437.
		1515.2	218.45	166.93	1511.3		1.9744	19043.
		4375.0	1107.3	583.2	<b>4375.0</b>	218.56	1.0840	1+127.
		3000.0	979.57	399.88	3000.0	149.97	1629.8	2940.0
		3600.0	671.5	479.64	3600.0	179.85	16.1	2335.3
		0.	25.3	2820.3	0.	0.	12.003	0.
		0.	-3.41	710.01	0.	0.	16.000	0.
		48.000	.01	259.30	1.2500	1.2500	12.000	210.00
		25.000	.02	1.0300	3.0100	3.0000	12.000	75000.
		30.000	01	7.5880	6.00 CO	4.0000	12.000	103.00
		8951 .	. 37.65	1.0006				
		282 .65	132.30					
		30246.	52792.					
		124 39 .	21805.					
84.	0 0	1629.7	221.7-	0.	1540.8	91.52	1852.7	12+74.
-		1502.3	215.	165.93	1498.7		1.8742	19057 .
		4374.7	1179.4	583.5	4375.0		1.0816	1.115.
		2999.8	389.01	400.12	3000.0	150.05	1629.6	2315.7
		3599.8	67 2 . 02	480.10	3600.0		-7.9	2312.6
		0.	11.1	2920.5	0.	2.	12.003	0.
		0.	-3.67	703.93	0.		16.000	0.
		48.003	.21	259.78	1.2499		12.000	210.00
		25.002	.27	.9900	2.9198	3.0000	12.000	75000.
		30.002	.21	7.5710	3.9958		12.000	103.00
			757.47		3.9950	4.0300	12.000	103.00
		94 09 .		1.0010				
		297 .45	133.43					
		318 35 .						
	-	13105.	22153.					

PAGE 57 PILOT	230007	ION-ALLOCA	TION MANASEMENT	MODEL
88.00 1647.8	227.15	ε.	1539.5 32.45	1854.0 12459.
1493.8	217.70	168.39	1493.7 74.745	1.3801 13073.
4374.8	1103.	583.5	4375.0 218.90	1.0808 1+1)8.
2999.9	380.23	400.14	3000.0 150.11	1632.2 2803.4
3599.9		480.15	3600.0 130.13	-14.2 2503.8
0.		2822.9	0. 0.	12.000 0.
0.		702.10	0. 0.	16.000 0.
48.002		259.89	1.2500 1.2500	
25.001		1.0000	2.9399 3.0300	
30.001				
			3.99990000	12.000 103.00
98 65 •		1.0002		
312.28				
33429.				
13772.				
92.00 1649.5		15.5	1538.4 82.49	1852.0 12474.
1496.5		170.47	1498.8 74.343	1.8836 13074.
4375.1		583.4	4375.0 218.79	1.0819 1.112.
3000.1	387.1=	400.01	3000.0 150.03	1673.9 2813.0
3600.0	672.10	480.03	3500.0 130.03	-3.2 2321.2
0.	-11.1	2824.4	0. 0.	11.998 0.
0.	2.20	704.75	0. 0.	16.000 0.
47.999	00	259.67	1.2500 1.2500	12.000 210.00
25.000		1.0000	3.0001 3.0000	12.000 75000.
30.000		7.5733	4.0001 4.0000	12.000 103.00
10323.			+.03010300	12.000 103.00
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96.00 1639.5		0.	1638.6 81.95	1849.0 12430.
1503.5		170.18		
4375.1			1504.9 75.150	1.8821 19055.
			4375.0 218.58	1.0830 1.119.
3000.1		399.92	3000.0 149.95	1633.2 2823.8
3500.1		479.92	3500.0 179.94	7.0 2830.9
0.		2823.9	0. 0.	11.999 0.
0.		707.46	0. 0.	16.000 0.
47.998		259.46	1.2500 1.2500	12.000 210.00
24.999		1.0000	3.0001 3.0000	12.000 75000.
29.999		7.5809	4.0001 4.0000	12.000 103.00
10781.		.9996		
341.91				
36615.				
15098 •	23045.			

PAGE	58	PILOT	650000-	ION-ALLOC	ATION MA	NAGEMENT	HODEL	
100.	00	1632.8	216.60	0.	1539.3	31.51	1849.0	12430.
		1505.0	213.95	168.74	1505	75.272	1.8790	13053.
		+375.0	1108.1	563.3	4375.0	218.58	1.0830	1:120.
		3000.0	379.95	399.94	3000.0	149.95	1631.9	2829.7
		3600.0	571.97	479.03	3500.0	179.34	6.3	2323.0
		0.	5.7	2322.7	0.	0.	12.001	0.
		0.	55	707.42	0.	0.	16.000	0.
		48.000	34	259.48	1.2500	1.2500	12.000	210.00
		25.000	07	1.0000	3.0000	7.0000	12.000	75000.
		30.000	07	7.5808	4.0000	4.0000	12.000	103.00
		11239.	314.00	1.0001				
		356.70	167.57					
		38206.	55647.					
		157 60 .	23294.					

PAGE 39 PILOT PROPURTION-ALLOCATION MANAGEMENT MODEL

J03(1)=S J09(2)=I J0R(3)=F J0R(4)=3 J03(5)=A T0TF3R=I F0RSI7=\*

0.00cT 1.000T 2.000T	3.000T 4.00T SI
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3.000T 2.501T 2.500T 3.000T 3.000T	3.000T 3.200T 9 3.600T 3.800T A
15.000T 17.000T 18.000T	19.0007 20.3007 7*
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	9T 5 F . 94.T*
. I	3T 3 F . 94,T*
. I .	9T 5 F . 9A,T*
· I ·	9T 3 F . 3A,T*
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. A. F S I.	.* . F8,AT
	. AT
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. 71 .59 . I	14
. 75.4 8 F .I	
S.T ARF I	
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. 5 . TI 48 F	
20.0 S	*F 9A
	9A .*
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· I 5.	94*T F .
· I S ·	9*T F . 94 
30.0 I S IS .	T9* F . 84
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. s i	T 9* C. 94
s I .	T 9. F. 9A
	T 9* F . 34
	T 0. F . 9A
	T 3* F. 94
	T 3* F. 94
	- T -9* F . 94
. S I	T 9* F . 94
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	F . SAT
. I S .	PT F . 34,T*
·	8T F . 9A,T*
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	3°T F . 30
: i s :	3°7 F . 84
50.0 I - S	T F . RA

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	. :	ıs.	97	F.	84, **
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	i	s .	91		
				•	94,1*
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	. I	s .		F.	94,T*
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PAGE 50 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

TRNG(1)=1 TRNG(2)=2 TRNG(3)=3 TRNG(4)=4 TRNG(5)=5 4IND=H

0.000	200.330 400.	100	
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PAGE 51 PILOT PRODUCTION-ALLOCATION MANAGEROM MODEL

PRECER UPTEG :SIZESO 0051250 TRINSEC F05F050

0.000T 2.1 0.000 1.0 .350 .9 .210 .2	00 .950 30 .250	.750T 1.000T R5 6.000T 9.000T CD 3.000 4.000 % 1.000 1.050 E .270 .230 a
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PAGE 52 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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1 .7 2	345
30.0	345
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· 37 1	345
· 27 1 · · ·	2345
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PAGE 53 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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				. 12,3456
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. 15	. 1		4 2	. 46
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			43 2 1	. 456
			43 21	. 455
•			53 1	. 12,3+5
			53 12	. 346
•			34 12	. 35,-6
•			34 1	. 12, -55
•			3 1	. 12.7456
30.0	· · ·,- · · · ·		3 21-	3455
•			3 21	. 3456
•			3 21	. 3455
•		•	3 21	. 3+55
•		•	3 21	. 3455
•		• 100	3 21	. 1456
•	•		7 21	. 3450
•	• 100		1	. 12,3456
		•	1	. 12,3456
42.2	•		1 1	· 12,3456
40.0	,		3 1 -	12,7456
			' 1	. 12.7456
			1	. 12,5456
		•	3 1	. 12,3456
			3 1	. 12,3+15
				. 12.3416
				. 12,3456
			,	. 12.3450
			; ;,	. 12,3+36
50.1			1 21-	3455
			3 21	. 3455
			7 21	. 1455

65				3	21	. 3455
				3	21	. 3455
				3	21	. 3450
				3 3 3	21	. 3455
				7	21	
				3	21	
			•	3		. 3455
	60.3			3	1	. 12,3456
					1	. 12,3456
			•	3	1	. 12,3456
		•		3	1	· 12,3456
	•	•	•	3 3	1	. 12,3456
	•	•		3	1	. 12,3456
	•		•		1	. 12,3456
	•	•		3 3	1	. 12,3456
	•	•			1	. 12,3+56
	•			3	1	. 12,3456
	•			3	1	. 12,3456
	70.0			3	21	. 3+55
				3		. 3456
				3		. 3455
				3	21	. 3456
				3		
					21	
				3	_	. 3455
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				3		. 3456
				3		. 3456
	80.0		•	3		. 3455
	00.0.					12,3456
	•	•	•	3		12,3456
	•			3		12,3456
	•	•	•	3		12,3456
	•	•	•	3	1 .	12,3456
	•			3	1 .	12,3450
	•	•		3	1 .	12,3456
				3	1 .	12,3456
		•		3	1 .	12,3456
	•			7	1	12,3456
	90.0	,		3	1	12,3456
		•		3	21	3456
				3 3	21	
				3	21	
				3	21	3455
				3		3495
				3	21 .	3455
			10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -		21 .	3456
			•	3	21 .	3455
				3	?1 .	3456
	100.0			3	21 .	3450
	101.0			3	21	11.55

## PAGE 15 PILOT PRODUCTION-ALLOCATION MANAGE TENT MODEL

CHANGES FOR RERUN - ATT

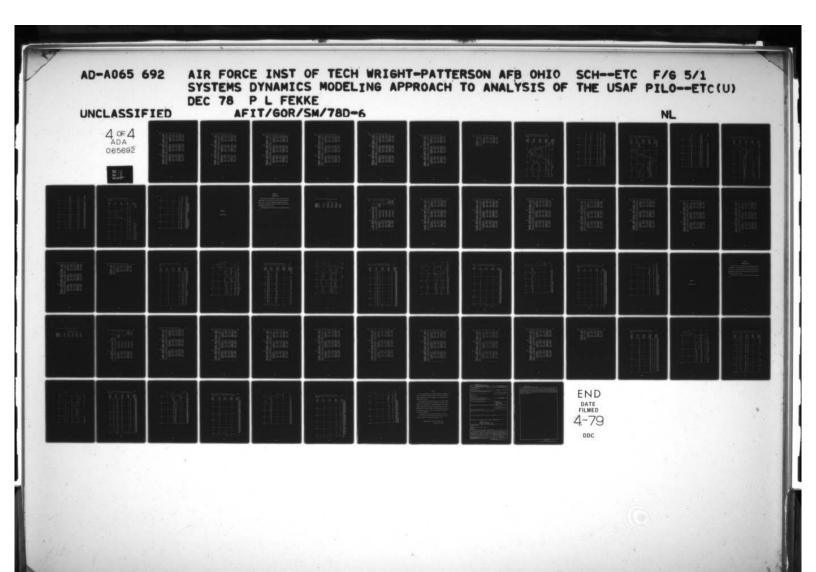
ORIGINAL H4 1.031 0.000 0.000 0.000 0.000 PRESENT H4 2.000 2.000 2.000 2.000

PAGE 15	PILOT	אייור כבי	ON-ALLOCA	1 ACT 14	413E4ENT	MODEL	6.1
1145	3 3 3 4 5 2 6 5 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6	2005T 4205T 4205T	NEED 2 3 4 5 FATT PREC TRNGEC TOSEC TOSEC TOSE TRAV	0*)FCE 2 7 7 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	177 23 33 20217I 23	TOTAL CAP	774508 777508 7757508 77575 77
E-30	E-00 E-00 E-00 E-00 E-00 E-00 E-00 E-00	5-00 5-00 5-00 5-00 5-00 5-00 5-00 5-00	E-00 E-00 E-00 E-00 E-00 E-00 E-00 E-00	E - 0 0 E - 0 0	E-00 E-00 E-00 E-00 E-00 E-00 E-00 E-00	E-00 E-00 E-00 E-00 E-00 E-00 E-00 E-00	E-00 E-00 E-00 E-00 E-00 E-00 E-00
c.00	3+25.0 5+0.0 4377.0 3000.0 3600.0 0. 48.000 25.000 30.00 0.	3 = 7.11 63.5 853.1 832.1 521.91 1.01 31 31 31 0.01	0.000 52.8 +52.1 310.00 372.0 1203.2 300.8 211.12 1.0000 7.0000 1.0000	7425.0 5+0.3 -375.0 7000.0 3600.0 9. 0. 1.2500 3.0000 1.2500	58. = 0 12.80 37.50 50.00 72.00 0. 0. 1.2500 7.000 000	1540.8 1.8000 1.0000 1180.9 0.0 12.000 16.000 12.000 12.000 12.000	11515. 12055. 15040. 1203.2 1203.2 0. 0. 210.00 75000. 103.00

GE 17	PILOT	ב.בה. כצם	ON-ALLOC	ATION MANAGEMENT	MODEL
4.00	3425.0	353.37	0.000	3425.0 205.50	1546.8 11515.
	543.0	53.5	52.8	0+0.0 33.40	1.3800 19755.
	4375.0	8=9.7	452.1	-375.0 252.50	1.0000 15040.
	3000.0	532.2	310.00	3000.0 150.00	1186.9 1203.2
	3600.0	529.30	372.G	3600.0 216.00	.0 1203.2
	0.	.00	1203.2	0. 0.	12.100 0.
	G.		300.8		16.000 0.
	48.000	.00	211.12		12.000 210.00
	25.000	.00	1.0000		12.000 /5000.
	30.000	•00			12.000 103.00
			7.0000	+.0000 +.0000	12.000 105.00
	+58.	13.1	1.0000		
	12.33	3.01			
	1325.	2096.			
	263.	1 393 .			
8.00	2117.2	7.2	0.000		1376.2 13416.
	1319.7	578.94	1198.8	2441.1 57.92	3.0933 1/121.
	3948.5	751.7	399.6		1.2041 15279.
	2710.9	513.3	614.00	3000.0 139.51	3461.1 4032.1
	3239.2	+60.1=	7-8.8	3600.0 165.70	2039.5 5203.9
	0.	-254.11	2379.4	0. 0.	10.034 0.
	o.	1121.4	963.2	0. 0.	15.000 0.
	53.184	426.44	221.12	1.1282 1.2500	12.000 210.00
	27.665	230.1.	.9019		12.000 75030.
	33.342	160.85	3.4217		12.000 103.00
	891.	51.0	. 944 3		
	24.09	19.51	• . 4 - 0		
	25 03 .	6140.			
	555.	3761.			
		2 01.			
12.00	1175.5	.10	0.000	1511.8 59.51	1317.8 13930.
12.00	2292.8				
		446.73	347.3		
	3623.3	731.2	1186.6	and the state of t	1.2461 15542.
	2489.9	577.3	809.31	3000.0 125.03	3826.1 4922.0
	297 3. 2	++93	983.0		2990.0 5497.3
	0.	436.25	2517.4	ŭ. O.	9.803 0.
	0.	552.7	1062.0		16.300 0.
	57.958	751.33	219.13		12.000 210.00
	30.122	510.11	.8279		12.000 75000.
	36.324	525.72	8.7227	3.3035 4.3000	12.000 103.00
	1238 .	195.0	1.0032		
	34.57	17.27			
	37 93 .	5155.			
		= 33			

PAGE	18 PILOT	בנירר בּבּ	10,-46600	ATION MA	113 EMENT	MODEL	2
15.5			0.000	1375.7	43.38	1524.7	13729.
	2337.8	273.77	412.1	2553.6	127.50	1.3515	15150.
	3596.5	295.2	1209.7	375.0	137.19	1.2210	1533 + .
	2453.7	111.	835.15	3000.0	131.44	3438.7	4421.0
	2975.2	577.77	961.7	3500.0	153.99	1993.7	4527.2
	0.		25-3.5	0.	0.	10.129	0.
	0.		1315.1	0.	0.	16.330	0.
	53.391		246.19	1.3275	1.2510	12.000	213.00
	30. 432		.8229	2597	3.0000	12.000	75000.
	35. 30.0		6.E473	3.3038	2.2200	12.000	163.00
				1. 1000	* . 1100	12.000	163.00
	1572.		1.0827				
	45.90						
	4944.						
	15 29 .						
20.0	510.4	. 31	0.010	1354.5	25.30	1803.3	12335.
	2033.8	173.0	176.5	1950.3	115.75	1.7245	17 134 .
	3884.7	11=3.7	975.5	- 375 . 0	223.10	1.1597	1-300.
	2552.3		676.70	3030.0	172.25	2515.4	3507.4
	321 4.5		785.2	3500.0	13+.75	772.0	3427.1
	0.		2535.1				
				0.	0.	10.936	0 •
	0 •		360.0	0.	9.	16.000	0.
	54.058		279.22	1.1099	1.2500	12.000	210.00
	29.278		. 38:9	2.5523	3.3170	12.030	75030.
	33.556		8.0512	3.5751	0000	12.000	103.00
	2063.	? 19.1	1.0860				
	59.17	30.37					
	5255.	117774.					
	2371.						
24.			43.583	1130.5	27.51	2003.8	12513.
	1521.4		133.7	1537.6	37.73	1.7571	13234.
	4285.8		365.4	~375.0			
					258.33	1.0849	13653.
	2334.2		459.13	3330.0	175.35	1944.2	29-3-1
	3534.4		5-1.9	3500.0	213.04	-93.5	2773.3
	0.	-	2362.3	Ü.	0.	11.869	C .
	0.		712.3	G.	٥.	15.000	€.
	49.99		296.25	1.22+5	1.2510	12.000	217.00
	25.550	A : . **	.9799	2.73+2	7.0110	12.000	75000.
	30.555		7.59-4	3.3272	0100	12.000	103.00
	24 93 .		1.0350				
	74.49						
	7301.						
	3340.						
	3340.	19.94.		_			

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PAGE 19	PILOT	25331377	0N-4LL 00	AP NCITAD	44354547	MODEL	411
25.03	1099.4 1475.1 4375.3 3005.4 3591.5 0. 0. 47.995 30.071 2939. 90.50	25 2.27 25 2.27 1175.7 1175.7 717.90 124.71 51.7  3.77 287.0 47.67	2.002 237.7 615.8 417.86 514.1 3085.6 726.9 282.60 7.635.4 .9834	0.		1988.2 12503 1.3672 18537 1.0908 13727 1795.5 2907.7 -111.8 2907.8 11.949 0 15.000 0 12.000 210.00 12.000 103.00	7 7 3
32.03	95.40. 42.49. 103.3.8 1717.0 437.0.2 299.5.4 359.8.5 0. 48.05.2 25.03.9 30.01.3 33.93.1 105.05.1 110.24.	17152. 11935. 43.57 43.57 1190.1 943.7 721.11 119.53 33.1 1.51 327.6 53.83 20115. 13753.	3.000 285.6 525.4 430.3 512.7 3197.6 845.9 272.28 .9990 8.0035 .9459	0.	101.32 257.37 176.75 212.34 0. 0.	1869.9 12730 1.9997 133-7 1.1434 17734 1853.3 3514.9 11.907 0 16.000 0 12.000 210.00 12.000 103.00	5
36.00	690.4 1936.5 4378.2 3012.7 3601.5 0. 47.954 24.978 29.987 39.43. 129.22. 57.09.	17.50 175.23 1173.7 935.6	0.000 242.9 618.6 423.77 3200.8 892.5 263.86 1.0007 8.17.65 .994.8	300.0 3600.0 0.	10.76 113.72 255.97 175.55 210.56 0. 1.2300 3.0000	1822.6 12331.6 1.9306 15514.6 1.1531 14351.6 1795.2 3593.6 189.2 3593.6 11.939 0.6 12.300 213.00 12.300 75300.6 12.300 133.00	

PAGE 20	PILOT	5500.13.	ON-ALLCC	THEFER HATE	M005L 41
40.23	517.5 1929.3 -373.0 2993.5 3598.7 0. 0. 48.022 25.012 10.011 4289. 135.48 14403.	09.3 270.02 1197.7 935.7 715.00 506.52 -34.1 1.32 1.32 413.2 59.31 25754.	0.000 199.5 623.0 427.26 512.4 3168.0 866.0 272.86 8.0772 1.0086	1124-1 36.44 1395-2 117.83 4375-0 258.01 3000.0 175.32 3610.1 212.32 0. 0. 0. 1.2494 1.2500 2.3986 3.0010 3.39860110	1873.4 12379. 1.9343 15556. 1.1539 13994. 1752.2 3533.9 315.2 3503.2 12.027 0. 16.000 0. 12.000 210.00 12.000 75000. 12.300 103.00
44.30	5443. 321.2 1300.0 4370.7 2996.7 3596.9 0. 43.048 25.027 30.725 47.37. 150.74 160.27.	15562. 165.77 246.70 1133.5 943.7 20.41 502.99 -37.7 1.37 7.27 7.15 463.1 7.27 7.15 463.1 7.27 7.16 15697.	0.000 168.1 627.1 430.22 515.7 3210.3 818.6 276.95 .9990 7.905.4	1124.2 49.14 1752.3 107.72 4375.0 251.55 3010.0 179.33 36J0.0 215.24 0. 0. 0. 1.2488 1.2500 2.9967 3.0010 3.9965 4.0010	1939.9 12737. 1.8297 18739. 1.1293 13352. 1761.1 3233.5 49.9 3250.2 12.025 0. 16.000 0. 12.000 210.00 12.000 75000. 12.000 103.00
48.30	1053.5 1706.4 4371.5 2997.7 3597.7 3597.6 0. 48.035 25.019 30.020 156.40 17699.	186.3° 259.5° 1197.1° 947.7° 23.7° 59.4° -7.0° 3.1° 2.2° 2.35 7.5° 9 85.0° 7.7° 17649.	0.000 206.6 626.5 431.08 517.0 3258.5 758.5 277.71 .5963 7.4357	1113.1 53.44 1639.0 102.75 4375.1 263.25 3030.0 153.51 3530.0 216.63 0. 0. 0. 1.2491 1.2530 2.9977 7.0030 3.9974 +.0000	1967.7 12574. 1.3716 13335. 1.1194 13737. 1793.2 3193.5 -57.7 3193.8 12.000 0. 12.000 213.00 12.000 75000. 12.000 103.00

PAGE	?1	PILOT	ב ד כניר פפ	ON-ALLO	CATION M	1:14 G E 15 N T	HOUEL		***
52.		1125.1 171.5 437.7 2999.7 29.7 0. 0. 43.003 25.001 30.002 130.002	150.10 287.77 1192.7 947.2 723.1 -79.4 17.0 .25 .15 .23 546.3	0.000 227.1 627.2 430.06 516.2 3295.2 3295.2 275.67	109F.3 1731.6 4375.0 3010.0 36J0.0 0. 0. 1.2499 2.9398 3.3397	57.35 102.94 252.54 130.10 215.11 0.	19F1.6 1.5046 1.1266 1800.5 -11.3 11.583 16.200 12.000 12.000	12707. 19177. 13302. 3256.1 3233.9 0. 0. 210.00 75000.	
56.	30	19337. 8970. 1065.2 1774.7 4376.2 3000.9 3600.9 0. 47.985 24.992 29.993 6105. 197.60	14773. 18513. 129.37. 1197.3 1197.3 944.5 25.17 15.9 -1.24 -35.5 102.51	834.3	ŭ.	105.02 251.+2 179.27 215.10 0. 0.	1924.2 1.7011 1.1374 1799.7 83.7 11.988 16.000 12.000 12.000	12755. 19027. 13356. 3374.0 3337.9 0. 0. 210.00	
60.	23	210 60. 95 35. 99 5.0 1811.4 437 5.8 300 0.5 360 0.5 47.991 24.995 29.995 65 61. 212.95 227 13. 103 97.	37591. 19292. 	0.000 220.8 625.4 428.83 514.7 3297.3 3297.3 1.0002 7.9852 .9963	1092.7 1812.9 4375.0 3000.0 5600.0 0. 1.2502 3.0306 4.0106	108.06 251.04 179.00 214.79 0. 0.	1916.3 1.6810 1.1407 1789.7 109.7 12.J00 16.000 12.J00 12.J00	12738. 13955. 13331. 3407.4 3407.0 0. 210.00 75000.	

37"

PAGE	22 91101	י בוירכאם	ION-ALLO	M NOITA	ANAGEMENT	MODEL	211
64.	00 987.9	1 12.2.	0.000	1034 .4	= 3.06	1927 .9	12759.
• • •	1902.7		212.4	1734.5	107.77	1.8636	13756.
	4374.7		626.2	- 375 .3	251.55	1.1368	13354.
	2999.		429.12	3330.0	179.34	1743.3	3363.4
	3599.8		515.2	3510.0	215.22	57.8	3360.1
	6.		3292.2	3530.0	1.	12.007	0.
	0.		833.2	0.	0.	16.000	0.
	48.004		274.24	1.2499	1.2500	12.000	213.00
	25.002		9909	2.3198	7.5330	12.000	75000.
	30.002			3.9998			
	7015.		1.0019	3.9990	0000	12.000	103.00
	228 .32		1.0019				
	24354.						
	11169.						
					• • • •		
65.		-	0.000	1092.8	51.77	1941.7	127 - 3 -
	1774.		211.7	1757.9	106.38	1.5709	19008.
	437 4. 2		627.0	4375.0	252.20	1.1320	13336.
	2999.4		429.66	3000.0	179.79	1784.5	3320.3
	3599.4		515.8	3600.0	215.76	18.3	7714.4
	0.		3296.1	0.	J .	12.005	0.
	0.		823.8	0.	٥.	15.000	с.
	48.309		275.12	1.2498	1.2500	12.000	210.00
	25.005		.9968	2.3394	3.0100	12.000	75000.
	30.005		7.9212	3.9954	0000	12.000	103.00
	7472.		1.0019				
	243.80						
	260 25 .	+5541.					
	11953.	21 170 .					
72.0	105 9. 4		0.000	1099.0	54.15	1945 . 7	12734 .
	1759.4	? 78. =-	216.1	1759.2	105.54	1.8901	130+5 .
	4 37 4.5	1191.4	627.1	4375.0	252.41	1.1308	13323.
	2999.7	945.	430.03	3000.0	179.94	1789.2	3307.9
	3599.5	122.35	516.0	3600.0	215.93	4.1	3309.5
	0.	19.51	3304.3	c.	0.	11.999	0.
	0.	2	821.4	0.	0.	16.000	c.
	44.00	.47	275.24	1.2499	1.2500	12.000	210.00
	25.003		.9959	2.9197	3.0100	12.030	15330 .
	30.003		7.9155	3.9996	0330	12.000	103.00
	7928 .		1.0004				
	259.36						
	276 95 .						
	127 39 .						

PAGE	::	PILOT	-כניה פגם	ION-ALLOC	NCITA	HANESEHENT	HODEL	
76.	0.0	1075.5	150.32	0.000	1046.	4 54.47	1941.0	12743.
	••	1754.5	284.72	219.7	1758.		1.8854	13 15 1 .
		+375.1	1191.1	526.8	4375 .		1.1327	13330 .
		3000.1	945.3	425.77	3000.		1792.0	7725.8
		3600.0	722.13	515.0	3630 .		21.1	3330.6
		0.	13.72	3309.6	3		11.997	0.
		0.	7. *	325.1	G		16.000	ů.
		47.999	05	274.81	1.250		12.000	210.00
		24.999	0	1.0000	3.010		12.000	75000.
		30.000	0.	7.9268	010		12.000	103.00
		8385.	815.	.9992				
		274.91	147.95					
		29367.	5 2437.					
		135 13 .	22158.					
80.	00	1059.6	144.04	0.000	1036 .	2 53.44	1935.5	12755 .
		1777.0	295.97	219.7	1779.	9 105.40	1.9839	13936 .
		4375.3	1190.5	626.5	4375 .		1.1347	13841.
		3000.2	945. 7	429.56	3000.	0 179.63	1731.3	3347.5
		3600.2	721.93	515.5	3600.	0 215.56	40.2	33+3.9
		0.	25.53	3309.7	0		11.998	0.
		0.	2.7	829.2	0	. 0.	16.000	0.
		47.997	21	274.42	1.250		12.000	210.00
		24.998	22	1.3001	3.010	2 3.0100	12.000	75330 .
		29.999	21	7.9432	330	2 4.6330	12.000	103.00
		88 43 .	948.	. 995 3				
		290 .41	152.17					
		310 35 .	55463.					
		14294.	22531.					
84.	0 1	1045.8	144.71	0.000	1037.		1974.5	12758.
		1793.0	297.32	217.7	173 2.		1.8796	13024.
		4 37 5 . 1	1190.7	626.5	4375.		1.1351	13845.
		3000.1	945.1	429.57	3000.		1789.2	3351.3
		3600.1	721.59	515.5	3600.		43.3	3350.8
		0.	413	3307.5	0		12.000	0.
		0.	?	829.9	0		16.000	0.
		47.398	1:	274.39	1.250		12.000	210.00
		24.999	13	1.0000	3.000		12.000	75000.
		29.999	11	7.9459	+.010	10000	12.000	103.00
		9299.	891.3	1.0000				
		305 .89	150.47					
		327 00 .	594?5.					
		15068.	22957.					

04	GE	24	PILOT	5500,00LI	ON-ALLCC	THEREGENAM NOTTA	MODEL	47
	89.1	11	1945.9	143.10	0.000	1337.7 52.65	1937.1	12753.
	63.	, ,	1783.0	231.72	216.2	1778.2 105.51	1.5775	19925.
			-374.9	1199.	52E .6	-375.0 252.13	1.1342	13941.
			2939.3	9-7.2	129.70	3000.0 173.58	1788.1	37+1.9
			7599.9	721.97	515.6	3500.0 215.51	33.8	3340.2
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			+374.8	1190.3	626.8	437F.3 262.1F	1.1333	13535 .
			2999.9	945	429.79	3000.0 179.76	1748.6	3732.9
			3599.9	21.30	515.7	3600.0 215.71	24.0	3331.9
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			48.002	.15	274.76	1.2500 1.2500	12.000	210.00
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			2999.9	945.3	429.79	3300.0 179.78	1799.5	3331.5
			3599.9	722.0-	515.7	3600.0 215.73	23.5	3332.1
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PAGE 15	offor	בינור פאפ	ON-ALLOC	AFION 4	ACBEAEN.	MODEL	err
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	-375.0	1137.	526.7	-375.0	252.12	1.1736	13536.
	3000.0	347.	429.73	3330.0	173.74	1790.0	3735.2
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		24.5	3309.4	0.	0.	11.999	0.
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	11125.	1067.	.9909				
	367 .32	193.45					
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	13131.	26157.					

PAGE 26 PILOT PRODUCTADOLLA-MOTTCUCCS TOLIC 35 BBP4

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P465 27 PILOT PROTU	CTTON-ALLOCATION	MANAGEMENT MODEL	411
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.4007 400.000 500.1 1.3007 1.5 0.02	00 400.33 227 1.03 207 .30 00 600.03	0 600.000 0T 1.200T 0T 1.000T 0 700.000	400.000 1 800.000 2 1.400T 3 1.200T 4 800.000 5 2.100T H 
1 W 5 3 4 10.01W 5 3 4	53 4 1 5 34 2	2 2	1 .5W .45
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DAGE 20	PILOT PRODUCTION-ALLOCATION MANEGEMENT MODEL 111	
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PAGE 29 PILOT PROTECTON-ALLOCATION HAVES EVENT MODEL ATT

13'

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APPENDIX H

NOISE LISTING

## APPENDIX H

## Noise Listing

The first part of this appendix prints the model output every fourth quarter. The variables are listed first and the scales are next at E.OO. If there were changes initiated when the computer run was made, they would be listed first; then a series of plots of the variables across time follows.

In this appendix, the entire model listing follows the computer run.

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## PAGE 16 PILOT PROPURETON-ALLOCATION MANAGEMENT MODEL

H -- NOISE

CHANGES FO	12 := 21	N -	MOTES
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ORIGINAL	N+	0.010	0.000	3.000	0.000	0.000
PRESENT	44	. 220	.200	.210	.200	.200
ORIGINAL		0.000	0.000	0.100	0.000	0.000
PRESENT		1.200	1.000	1.030	1.000	1.000
ORIGINAL		4.010	4 .000	4.100	4.000	+.000
PRESENT	754	44.010	48.000	48.000	48.000	+3.000

PAGE 17	01771	22011225	ON-ALLOC	AT NOT 12	4:3E4ENT	MODEL	321CF
TIME	פכע	TRUS	NEED	250005	417	WIND	DIMFOR
	2	2	2	2	2	TPINS	TOTFOR
	•	7	3	3	7	CAP	123=08
			4		4	TONEED	23175
	-	5	5	5	-	FORCE	);;[7E
	HEDD	DF357	PATT	CRATIO	DORATE	47.	143742
	2	11.73	PREC		32411	413	2
	*		TRNGFC	2 3	3	3	3
			FOEFC				
	<b>4</b>	4		4 5	4		4
			TOEL	,		5	5
	15005	9005	TREV				
	PCOST	4075					
	TCOST	101003					
	UCOST	0002-					
E-00	E-00	5-00	E-00	E-00	5-00	5-00	5-00
	€-00	E-0 '	E-00	E- CO	E-00	E-00	E-00
	E-00	5-02	E-00	E-00	E-00	E-00	5-00
	E-00	-00	E-00	5-00	E-00	E-00	E-00
	E-00	E-00	E-00	E - CO	5-00	E-00	5-00
	E-00	E-0"	E-00	E- CO	5-00	E-00	5-00
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	540.0	58.5+	52.80	540.0	12.376	1.8330	13055.
	4375.0	459.0	452.08	4375.0	39.38	1.0000	150+0.
	3000.0	343.0	310.00	3000.0	54.19	1185.9	1233.2
	3600.0	520.87	372.00	3600.0	75.36	0.0	1203.2
	0.	3.0	1203.2	0.	3.	12.000	0.
	0.	0.00	300.80	0.	0.	16.000	0.
	48.000	07	211.12	1.2530	1.2500	12.000	210.00
	25.000	00	1.3000	3.0100	3.0000	12.000	75000.
	30.000	00	7.0000	00C0	0010	12.000	103.00
	0.	0.00	1.0000				
	0.00	0.00					
	0.	7.					
	0.	0.					

PAGE	1 9	PILOT	0410.13.	ION-ALLOC	TE NCITA	423E4ENT	HODEL	
4.0	)	3-13.5	**1.7	с.	3419.7	55.50	1540.2	11520.
		643	77.77	53.27	5+5 .1	14.157	1.8424	13050 .
		4374.3	851.7	452.54	+375.0	34.91	1.0000	15340 .
		3001.5	3 41.77	305.63	3330.3	55.70	1185.9	121 2
		3600.0	320.57	372.04	3510.0	57.52	7.5	1214.0
		0.	5.3	1206.5	0.	9.	12.001	0.
		2.	.22	303.56	0.	0.	15.000	0.
		45.008		211.19			12.000	
					1.2458	1.2510		213.00
		24.937	-1.57	1.0001	3.2015	3.0000	12.000	75000.
		30.000	.01	7.0000	0000	0000	12.000	103.00
		457.	15.77	.9997				
		12.32	3.02					
		1325.	2095.					
		293.	1933.					
8.0	0	3399.1	347.32	0.	3411.8	70.75	1539.8	11527 .
		651.4	77.70	54.23	6= 2.4	12.152	1.8738	12753.
		4375.1	354.2	453.50	+375.0	98.25	1.0000	15039.
		2999.5	379.95	309.79	3000.0	54.31	1158.2	1221.4
		3601.2	321.2	370.70	3500.0	75.10	11.4	1221.0
		0.	12.	1209.6	0.	0.	12.001	0.
			.;.					
				305.34	0.	0.	16.000	0.
		47.995	1	211.30	1.25 00	1.2530	12.000	210.00
		25.002	• 20	1.0001	2.9398	3.0000	12.000	75000.
		29.990	-1.2	7.0000	4.2014	4.0000	12.000	100.00
		915.	71.51	1.0000				
		24.54	5.05					
		2643.	4192.					
		565.	3815.					
12.0	0	3417.0	156.5"	n.	3420.7	71.03	1542.4	11517 .
		641.5	55.25	53.79	5 - 2 . 0	13.534	1.8775	19050 .
		4375.0	857.1	451.96	+375 .0	32.20	1.0000	15039 .
		2998.5	393.07	311.46	3000.0	59.75	1189.4	1204.4
		3599.5	517.37	372.24	3600.0	75.79	-1.8	1207.3
		3.	7.	1209.1	0.	0.	11.999	0.
		3.		301.09	j.	0.	16.000	0.
		47.999	-1.01	211.70	1.25 03	1.2310	12.300	213.00
		25.012	1.47	.9909	2.9966	3.0000	12.000	75000.
		30.003	• • •	7.0000	3.9495	0000	12.000	103.00
		1372.	47.37	1.0006				
		36.97	0.0-					
		3974.	5 ? 92 .					
		852.	5444.					

SEICH

91GE 13 P	teat	ב בניר ר ג ב	ON-ALL CO	AP HCITA:	MASEMENT	MODEL		321CM
15.22 34	23.5	37		3419.0	59.49	1542.5	11515.	
	.1.6	47.11		5.0.0	13.174	1.8806	19055.	
		953.1	. 54 . 7 3			1.0300	15035.	
	29.7	347.41	309.38		52.39		1205.2	
	33.3	522.31	373.86	3500.0	73.77	-3.0		
,,,	0.	-1.1	1209.5	0.	0.	11.998	1213.5	
	0.	87	301.55	Ç.	2.	16.000		
L. A.	.017	1.51	211.61	1.2496	1.2330	12.300		
	994	71	.6908			12.000		
	014	1.5	7.6366	3. 1982		12.000		
	330.	57.3:	.9959	,,,,,	0555	12.000	203.00	
	9.32	12.17	•					
	301.	9 732.						
	1 37 .	5927.						
20.00 34	.0.1	754.37		3+72.5	74.97	1543.4	1150E.	
6	32.8	52.31	50.36	530.6	11.895	1.3768	13077 .	
43	77.5	375.7	449.65	4375 .0	35.51	1.2000	15032 .	
70	00.5	579.35	309.05	3030.0	54.30	1152.0	1137.7	
359	99.3	520.5	372.96	3000.0	55.88	-15.2	1137.5	
	0.	-7.5	1203.1	G.	0.	12.005	0.	
	0.	-2.21	296.93	0.	0.	16.000	0.	
	. 971	-2.57	211.09	1.2507				
	. 335	57	1.0002	3.0105	3.0000			
	. 225	.50	7.0300	3.9392	· . 3333	12.000	103.00	
	287 .	78.57	.09c2					
		15.72						
	623.	17493.						
	· 21 ·	3259.						
			• • • •					
	2000	351.53	с.	3424.0	79.45	1541.5		
	35.6	*0.3*	54.47	537.7	12.566	1.8936	19073.	
	75.5	979	451.54	4375.0	35.08	1.0000	15037.	
	99.7	595.17	311.15	3000.0	59.25	1190.3	1203.5	
, 35.	98.7	520.73	373.17	3600.0		.3	1205.5	
	0.	-11.3	1205.2	0.		11.996	0.	
	0.	2.13	300.88	0.	0.	16.000	0.	
	994	1.2	211.21	1.2511	1.2500	12.000		
	.010	1.73	7.0000	2.3987 3.9986	3.0000	12.000		
	745.	94.3	1.0001	1.4496	+• 0000	12.000	103.60	
	4.00	18.11	1.0001					
	955.	12570.						
	704.	9431.						
	0.	9471.						

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PAGE 20 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL
                                                                      NOISE
 28.00 3+25.6 157.07
542.5 57.11
-375.0 953.7
                              C. 3426.9
                                            53.52 1539.8 11515.
                            50.00
                                   6+0.4
                                            11.384
                                                     1.8382
                                                              13156 .
                                             31.01
                           452.03
                                   -375 .0
                                                     1.0000
                                                              150+2.
          3000.5
                  597.6.
                           309.67
                                    3 3 3 0 . 0
                                              59.97
                                                      1195.2
                                                              1213.2
          3599.2 519.9
                           372.61 3500.0
                                              *4.39
                                                         5.9
                                                              1211.9
                                              0.
                   -2.3
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                           1204.9
                                    3.
                                                     12.002
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                           333.29
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                                                     16.000
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                  -.22 210.99 1.2500 1.2500 12.000
-.47 1.0000 3.0005 3.0000 12.000
.37 7.0000 3.9391 4.0000 12.000
         48.000
                                                              210.00
         24.936
                                                              75000.
         30.007
                 109.73
          3203.
                            . 9989
           86.32
                   21.17
           9280 .
                  14685.
                  10577 .
          1965.
                  350.31 0. 3421.5 71.17 1540.1 11519.
 32.00 3620.3
                  150.21
                   49.1"
                           5-.20
          642.2
                                  5-3.8 12.073 1.8670 19051.
                   961.7
         4374.2
                          453.16
                                    4375.0
                                              87.30
                                                     1.0000
                                                              151+0 .
                  185.25
         2998.6
                           311.88
                                  3303.0
                                              55.40
                                                     1130.2 1211.9
          3600.5
                  519.22
                           371.00
                                                       7.9 1213.9
                                   3630.0
                                            72.01
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            9.
                          1205.9
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         48.009
                                   1.2498
                                            1.2500
                          211.15
                                                     12.300
                                                              210.00
                                  2.9985 3.0000
                          .9958
7.0000
         25.011
                                                     12.000 75000.
                 125.45
         29.936
                                    -.0 105
                                            ..0000
                                                     12.000
          3550.
                          1.0006
          99.54
                   24.1?
         10604.
                  15793.
          2267. 11569.
                         0. 3425.6 /3.52 1540.9 11514.
0. 539.3 13.454 1.8590 13055.
                 357.55
 35.00
         3419.3
                   55.13
                          48.94
                                   539.3 13.454
4375.0 92.58
          543.4
                 855.3
542.21
521.73
         4379.1
                                            32.58
                                                     1.0000
                                                             15340 .
                           309.39
         3001.3
                                    3010.0
                                              59.01
                                                              1212.5
                                                     1151.6
         3596.3
                           375.57
                                    3630.0
                                             72.08
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                           7.0000 3.9959
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          4113.
                  141.15
                            .9993
                   27.12
         110.37
         11929.
                 1 4875.
          2550. 12465.
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PAGE 21 PILOT	ב בנוחר אב	01-46100	בר מכזיג	4:3E1ENT	MODEL	PRICH
40.33 7477.7	15		7.29 3	71.45	1542.2 11511	
334.2					1542.2 11511	
4373.5	473.					
3001.0	3 3 7 1	308.52	3030.3	50.02	1.0000 15039	
3500.3		371.56	25 20 3	17.52		-
3500.3	-4.	1199.5	1510.0	0.	-12.4 1197.	
j.	1.47	296.48	c.	2.	11.998 0 16.000 0	-
+4.015	1.4	211.09	1.2-36		16.000 0	
24.991	-1.03	1.0000			12.000 75010	
29. 337	- 70	7.0300	4.23(3		12.000 7900	
45.75.	135		4.1163	4.0300	12.300 103.0	U
123.30	30.17	1.000				
13255.	2397.					
2934.	17773.					
						_
44.00 3135.0		0.	3432.3	59.46	1541.4 11577	
635.6	57.41	49.21	632.3		1.8576 13077	
+376.4	453.	-50.27			1.0300 150.0	-
3001.0	60 1.41	308.41			1177.9 1137.	-
3502.3	512.1	379.05	3630.0		-14.1 1132.	
3.	-3.	1196.2				-
0.	-7.22	296.75	0.	9.	12.008 0 16.000 C	-
47.994	-1.47	211.02			12.000 210.0	
24.332	34				12.000 75000	
23.431	-2.2				12.000 103.0	-
50 33 .	172.21	.9965				•
135.53	73.17					
1+551.	27771.					
7115.	14715.					
49.30 3442.2	145.7	6.	3426 .4	132.74	1540.2 11515	
571.5	72.33	59 1	339.9	2+.353	1.9942 19059	
4375.7	357.1	450.93	-375 .J	174.97	1.0000 150+1	
2997.9	591.67	311.48	3000.0	113.32	1195.7 1195.	3
3397.5	523.65	37 0	3500.0	1.3.52	4.0 1205.	4
1.	-17.3	1201.4	0.	0.	11.968 0	
G.	9.37	295.09	ů.	0.	16.300 0	
47.932	77	211.02	1. 25 62	1.2300	12.000 210.0	0
25.019	2.1-	.9957			12.000 75000	•
30.319	?. ?:	7.0000	3. 99 15	3300	12.000 103.0	0
5491.	187.57	1.0010				
147.95	35.17					
13995.	25155.					
3797.	14673.					

45 47 . 15 331 .

443.64

2292.2

593.33

243.44

7.2613

.9825

.9999

3500.0 1+4.51

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1.2500 1.2500 12.000

2.9986 3.0000 12.000 4.0105 4.0000 12.000

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C.

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2452.1 0.

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225.57 58.51 24257. 33522. 6460. 17375.

79.70

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-.4:

378.17

.11

0455	. PILOT	553005.1	CH-4L100	ATION	42	1422=4=11-	MODEL		NOTSE
75.1	1992.7	177.3	5.	2110		31.52	1572.4	12356.	
	137 2. 4	21 2.12	1-34	1 33 3			1.0973		
	4377.0	1027.3	537.07	4775		173.21	1.0004	1.555.	
	3003.5		356.13		-	123.76	1+37.2	2503.7	
	350 3. 7	317.21	439.25	3500	-	142.45	321.2	25 23 . 3	
	0.	215.	2282.2	3,10		2.	11.998	0.	
	0.	10.97	£50.93		ı.	1.	15.300	0.	
	47.974	-2.32	239.16				12.000		
	2+.9/1	-7:	1.0008	3.30				75200.	
	29,949	-7.7.	7.4226	4.10	-		12.000	103.00	
	85 85 .	. 10. 22	.9930						
	247.10	7 7-							
	257 32 .	41937.							
	69 33.	14 257.							
					-				
80.0			C •	2229	.4			13274.	
		16.0.35	93.16	1239	.1	F5.937	1.5018	19325 .	
	4 77 5. 5	1715.7	537.14	-375	. 0		1.7424	1+534.	
	2999.3	3 1 3 . 1	309.12	3030			1441.9		
	3501.1	614.3.	441.33	3500		135.54	113.1	2377.3	
	0.		2244.2		0.	0.	12.046	0.	
	0.	-4n.11	605.96			0.	15.300	0.	
	47.993	33	242.30					213.00	
	25.006	.*	1.0001				12.000		
	24.971	-1.11	7.2967	4.00	12	2.0000	12.000	133.00	
	90 33 .	• 4 7 . 3 7	1.00/1						
	253.52	79.91							
	27193.	**=33.							
	7+62.	1351.							
A 3				2213	-	57.35	1700 6	12146.	
6	1202.0	124.27	990	11/3			1.9265	13010.	
	4369.7	1027.7	544.76	- 775			1.0195	1.332.	
	2999.2	312.37	370.74	*030		125.01	1458.9	2135.3	
	3598.7	571.3"	444.64	3500		134.68	-135.7	2172.0	
	3996.7	7	2279.7		0.	2.	12.019	C .	
	ċ.	-24.31	548.53		1.	j.	16.300	0.	
	43.359	5. **	246.76		-		12.303		
	25.015	1.11	.ggc1	2.39		3.0110		75000.	
	30.011	1.1	7.1367	3.19	-		12.000		
	34.92.	. 77.47	1.5088	0.00	0.5	3.0770	12.000	23,000	
	257.54	45.43	1.00.0						
	23675.	. 7972.							
	3241.	9042							

PAGE	25 PILOT	5500/104	TON-1100	CATION	41N43E15N*	MODEL	NOISE
93.0	231 2.4	307.23	c.	2220.	.5 31.21	1753.3 12130.	
33.53	11		130.16			1.9050 19143	
	7375.6	-	F 39 . L			1.0180 14351.	
	2999.4					1485.7 2130.1	
	3597.3		446.37	3510		-107.0 2135.3	
	0.		2302.3		0. 0.	11,986	
	٥.	11.07	545.03		0. 0.	16.300 0.	
	47.994					12.000 213.00	
	25.005	.==	3292			12.000 75000.	
	30.023		7.1211			12.000 103.00	
	9950 .		.5992				
	281.34	91.4					
	30205.	49547.					
	86 17 .	19274.					
92.0	2295.5	269.47	C .	2217	.6 95.41	1750.7 12131.	
	1193.7	178.23	142.27	1215 .	.8 -7.529	1.9318 19118.	
	4371.9	1024.5	542.82	4375 .	.0 175.52	1.0306 14+08.	
	3000.0	313.30	370.37	.3000.	.0 117.16	1500.1 2305.0	
	3599.5	619.99	143.58	3500	.0 149.45	18.8 2733.5	;
	0.	-77.7	2311.7	0	0. 0.	11.975 0.	
	0.	22.17	576.50	0	G. J.	16.000 0.	
	43.034	3.10	243.56	1.249	91 1.2500	12.000 210.00	)
	25.000	.01	.9997	3.000	00 3.0000	12.000 75010.	
	30.001	.1"	7.2112	3.919	98 4.3030	12.000 103.00	)
	10407.		.9947				
	296.05	37.25					
	317 32 .	52221.					
	9155.	19525.					
95.0	2173.7		0.	2209.	.5 37.32	1729.6 12244.	
	1264.1					1.8845 13031.	
	4375.1		538.55	-375		1.0382 14+53.	
	3302.1		367.83			1478.9 2392.2	
	3602.9		441.02		0 137.30	40.1 2332.1	
	0.		2302.1		0. 0.	12.002 0.	
	0.				0. 3.	16.000 0.	
	47.988		242.35			12.000 210.00	
	24.992		1.0006			12.000 75330.	
	29.975		7.2675	+.003	32 4.0000	12.000 103.00	)
	10867.		.9972				
	309.95						
	332 33.						
	9573.						

PAGE 36 PILOT PROMISTYON-ALLOCATION MANAGEMENT MONEL NOISE 2138.0 254.47
1253.4 163.47
4374.5 1025.
2393.3 31...
3599.5 522.27
0. 72.5
1. -4.20
45.035 .52
25.010 1.20
30.024 .57
11323. 592.55
323.55 103.77
34723. 57773.
10205. 19935. 100.00 2138.0 254.91 0. 2210.5 \*1.76 1779.4 12234. 124.81 1259.2 50.357 535.52 +375.0 175.55 371.16 3000.0 120.49 1.3691 13995. 14++5. 1490.0 53.6 2357.2 0. 0. 12.002 0. 2303.6 7.2570 3.3394 4.0000 12.000 103.00 1.0025 10203. 19935.

.01	- Charle	C.C. W. L.			.0.25		431	3.5
יכנ פורוווים	109(Ta(5)	J236		133(5):		1:50		
F02517=+	. ( ) ( )	3331	-1= -	13.11.11	1015	16.1		
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0 2225								
0.0001	1.1017	5.1			T.000T		00	
1.1117		1.3			.500T		2.00	
4.3007	4.1307	2			300T		***0	
2.1007	2.3317	2.1			TC00.		3.10	
3.3021	1.40 **	3.5			5.600T		3.70	OT A
17.2507	1	15.2	507	10	.730T		19.25	
0.0	I ·				0	-3- T		94, 1.
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PAGE 28 PILOT PROPRICTION-ALLOCATION MANAGEMENT MODEL NOISE

## TRNG(1)=1 FRNG(2)=2 TPNG(3)=3 TRNG(4)=4 TRNG(5)=5 4[4)=4

.000T 500.000 50	.303 .303 .303 .30.336 .30.336 .30.337	400.737 1.309T 700.330 600.330	60	0.000 1.100 T 0.000 0.000 1.300 T	1.200T : 900.000 :	12
0.025 -3- 25 3 25 3 25 3	:	W1 14 . 14 . 14 .		:	14 . 14 . 14 . 14	
. 25 3 . 25 3 . 25 3 . 25 3 . 25 3		W14 . W14 . W14 . W14 .		:	: : 1H	
25 3 25 3 25 3		W1+ . W14 . 1 4 . 14 . W1 .			. 1W	
2 5 3 2 5 3 2 5 3 2 5 3 2 7 3		W1 . W1 . W1 . W1 .			. 14 . 14 . 14 . 14	
. 25 3 . 25 3 . 25 3 . 25 3	:	W1 . 14 . 14 .		:	. 14 . 14 . 1W . 1W	
25 3 25 3 25 3 25 3 30.0 - 25 -3- 25 3		14 . W 1 . W 1 . W14			. 1W . 14 . 14 . 14	
. 25 3 . 25 3 . 25 3 . 25 3 . 253		1 4 . 1 4 . 1 4 . W14 .			. 1W . 1W . 1W	
2 53 25 3 25 3 25 3 40.025 -3- 2 5 3 2 5 3 2 5 3		W1 . W1 . W1 . W1 W1 .			. 14	
. 25 3 . 25 3 . 25 3		W1 . W1 . W1 . W1 .			. 14	
50.3 1	7 1 	1 <sup>4</sup>	2		. 14	

4	1 5 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 2		. 35 . 34
60	0.01	3 5 3 5 5	3 5 4	. 3W . 35
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50	2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1	. 3 5 4 3 - 5 - N - . 3 5 M . 3 5 . 3 5 1 . 3 5 1 . 3 5 1 . 3 5	.4 .4 	
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PRED=P UPT=3 OSITE=0 OCSIZE=0 TFINR=% FOFFC=E TPNFF0=0 .2307 .75 a T 1.1117 .501T 1.000T R: 1.1007 4.00GT CO 3.500 % 0.2101 2.030 7 3.000T 2.000 2.510 3.000 1.590 . 150 . 370 E .930 .990 1.010 .200 .190 .250 a .223 . 240 - -.- - - E- - - . RGCD . RGCh . RGC1 . RGCD 9 a . RGCD . 9600 E . RGCD 10.0. - -RGCD RGCD 9 : a . R303 . RGCO . 2500 RR . RSCO a 9 . 9600 . RGCD R - -5- - - . RGCD E . RGCD E . RGCD 5 . RGCD 9 . 2500 7. 7. 3333 . RGCO R 19 13 . RGCD \* . RGC1 . RGCD - - . RGCD 30.0. - -. RGCT Z. . 2300 7. . RGCO . RGC1 . RGC1 . RGC1 7. X, 9 . 9500 . RGCT - . 9600 . 9600 . 9600 . RGCD . RGCD . RGCD A. 101 10 800 . RGCh . 950) - . 90 50.1. - -

PAGE 39 PILOT PROPINTION-ALLOCATION MANAGEMENT MODEL NOTSE

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PAGE 30 PILOT PROTTCH-MOTEL MOTEL NOTSE NOTSE(12) = 0 POSC(1) = 0 POSC(2) = 0

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80.3	77 1 2 7 2 1 437 1 274 1 2 74 1		3+5
	2 7 1 2 7 1 2 7 1 2 67 1 2 631 74 1 24		345 45 45 45 13,45 12,35 235
90.0	1 37 1 37 1 37 1 37 1 57 1 5 7 1 7 7		345 345 345 345 345 345
100.0	1,21 21 2 1 2 1 2 1		1345 2343 2345 2345 2345 2345

PAGE 31 PILOT PROMIDETON-ALLOCATION MANAGEMENT MODEL

PETCH

CRATIC(3)=1 CCRATIC(1)=2 CFATIC(+)=3 33R4FI(4)=4 CR4([3(5)=5 0CR4TI(5)=6

1.1+0	1.17	200 1.2	230	1.250 12
2.700	2.300 2.3	3.0	000	3.100 34
3.700	7.900 3.9	4.0		4.100 55
0.0	1.10		-31	12,3456
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	5 .1		2 . 13,46
	5 . 31		2 . 45
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61.3		1	2 45
91.1.		35 1	2 . 145
•		354	2 . 145 1 2 . 46
•		43	21 . 35,45
•			
•		453	21 . 46
		. 543	1 . 12, +0
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		534	1 7 . 45
		534	1 2 . 46
		. 34	12 . 35,45
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			1 . 12,3+56
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APPENDIX I

FORECAST LISTING

## APPENDIX I

## Forecast Listing

The first part of this appendix prints the model output every fourth quarter. The variables are listed first and the scales are next at E.OO. If there were changes initiated when the computer run was made, they would be listed first; then a series of plots of the variables across time follows.

In this appendix, the entire model listing follows the computer run.

PAGE 16 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

			I	FORELA	- FUNELAST			
			CHANGES	ED6 = 5414	- NOISE			
ORIGINAL	N4	0.010	0.000	0.000	0.000	0.000		
PRESENT	N'+	. 27 7	.200	.200	.200	.200		
ORIGINAL	44	0.000	0.300	0.000	0.000	0.000		
PRESENT	44	1.000	1.000	1.000	1.000	1.000		
ORIGINAL	TS4	4.000	· .000	4.100	4.000	4.000		
PRESENT	TS+	48.000	48.000	48.100	48.000	+3.000		

AGE 17	PILOT	550 JIG. I	ON-ALLOC	APP NOTTE	143 E 4 E N T	400EL	*315*
TIME	133	TOUT	NETO	DECRCE	111	HIND	SCIFIC
	2	?	2	2	,	TPINS	121538
			3	3	7	CAP	rangar
	4	4	4	4	4	TONEED	2517€
	c		5	5	c	FORCE	22SE 7E
	HEDD	26762	FATT	CFATIO	TIESCO	ATJ	140145
	2	,	PREC	2	2	2	2
		7	TRNGFC	3	7	3	
		4	FOEFC	4	L.	4	4
	-	5	TOFL	5		5	6
	SCOST	2015-	TRAV			,	
	PCOST	1035				•	
	TOOST	LOTO23					
	UCOST	2025.					
E-00	E-00	5-00	E-00	E - 00	5-00	5-00	5-00
	E -00	E-0 0	E-00	E-00	E-00	00	E-00
	E-00	5-00	E-00	= - 00	E-00	5-00	E-00
	E-00	5-00	E-00	E-00	E-00	E-00	5-00
	E-00	5-00	E-00	E-00	5-00	F-00	E-00
	E-00	E-12	E-00	E-00	E-10	5-00	E-00
	5-00	5-00	E-00	E-00	5-00	5-00	E-00
	E-00	E-03	E-C3	E-00	5-00	5-00	E 03
	E-00	5-01	E-00	E-00	E-00	E-00	E-00
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3.00	3425.0	157.37	0.	3425.0	59.26	1540.8	11615.
	540.0	58.5-	52.60	5+0.0	12.976	1.8800	13055.
	4373.0	959.2	452.08	4375.3	39.38	1.0000	15040 .
	300C.0	587.77	310.00	3000.0	54.19	1135.9	1233.2
	3500.0	120.90	372.00	3500.0	75.54	0.0	1203.2
	0.	1.1	1203.2	0.	2.	12.000	0.
	0.	0.00	300.80	0.	2.	16.000	0.
	43.000	00	211.12	1.2500	1.2500	12.300	210.00
	25.000	00	1.0000	1.2000	. 2220	12.000	75110.
	30.000	00	7.0000	4.0100	4.0000	12.000	103.00
	0.	9.01	1.0000				
	0.00	0.00					
	0.00	0.					
	3.	0.					

PAGE	1.6	PILOT	350005.	ON-ALL OC	M NCITA	1473E4EN-	MODEL	NOTE
٠.	00	3411.4	357.17	с.	3417.7	53.56	1540.3	11522.
		047.3	70.73	52.81	5.5.9	14.216	1.5796	13750.
		4374.3	851.1	452.93	4375 .0	34.31	1.0300	15140 .
		3001.5	591.27	308.62	3000.0	35.70	1195.4	1215.8
		3600.0	\$22.72	372.03	3530.0	57.52	8.0	1215.1
		0.	5.2	1208.2	0.	0.	12.001	0.
		0.	4-	104.19	c.	9.	16.300	c .
		43.308		211.20			12.000	213.00
		24.937	-1.57	1.0001	3.0015		12.000	75030.
		30.000	-		+.30(0	4.0000	12.000	109.00
			.01	7.0000	** 10 (0	2.0000	12.000	103.00
		457 .	15.7	.9966				
		12.32	3.03					
		1325.	2035.					
		293.	1339.					
9.	77	3395.2	348.90		3409.0	70.71	15-0.6	11529.
		555.5	71.91	52.17	553.7	12.228	1.9559	13755.
		4375.1	864.7	453.51	4375 .0	35.68	1.0200	15338 .
		2999.8	579.87	309.80	3000.0	5+. 73	1186.2	1213.8
		3601.2	521.27	370.71	3500.0	76.12	4.8	1213.4
		0.	12.0	1208.5	0.	0.	12.003	0.
		0.	-1.9	304.20	c.	0.	16.000	0.
		47.999	17	211.35	1.25 00		12.000	213.00
		25.002	.27		2.9198		12.000	75300.
				1.0001	4.0014		12.000	
		29.930	-1.27	7.0000	4.0014	1.0000	12.300	103.00
		915.	31.73	.9999				
		24.55	5.05					
		2547.	4197.					
		557.	7915.					
								• • • •
12.	0 0	3427.0	357.41	0.	3420.4	71.24	1543.7	11615.
		634.2	57.00	56.68	6+0.+	13.493	1.8673	13055.
		4376.0	838.0	451.98	4375.3	92.21	1.0300	15036.
		2998.5	597.17	3118	3000.0	59.76	1194.4	1137.0
		3599.5	519.00	372.26	3500.0	75.90	-4.4	1207.8
		0.	-5.5	1212.2	2.	0.	11.993	0.
		0.	6.10	299.25	C.	0.	16.000	0.
		47.989	-1.00	211.35	1.25 03	1.2300	12.000	210.00
		25.012	1.4.	.9999	2.7936		12.030	75030.
		30.003	. 41	7.0000	3.9995	0700	12.000	103.00
		1372.	47.33	1.0011				
		36.98	2.25					
		3975 .	5 2 34 .					
		853.	5445.					

PAGE	19	PILOT	P3000073	CN-ALLOC	AP HCITA	NESEMENT	MODEL		NOTSE
15.		3424.2		٠.					
13.	3 5				3413.0	59.55 13.153	1542.8		
								13053.	
		+373.5				81.49	1.0000	15134.	
		3000.7		309.37		52.79			
			522.37	373.67	3500.0	75.76	-1.6		
		2 •	-5.3	1211.5	0.		11.398		
		0.	1.47	301.31	3.	0.		0.	
		43.316	1.4-	211.39	1.2495	1.2500			
		24.934	77	.9998	3.0 307		12.000		
		30.014	1.5	7.0000	3.9932	2020	12.000	103.00	
		1930.	2	.9994					
		49.33	1 2.10						
		5302.	8 795.						
		1139 .	5923.						
20.	00	3447.5		0.			1542.9		
		627.0	60.5=	52.69	627.7	11.775	1.8884	19077 .	
		4 377.5	955.	449.66			1.0000		
		3000.5	379.95	309.06	3000.0	54.79	1164.4	1134.1	
		3599.3		372.57	3500.0	55.37	1164.4	1193.0	
		0.	-11.4	1202.4		0.	12.002	0.	
		3.	.51	296.03	0.	0.	16.000	0.	
		47.971	-2.57	211.00	1.25 07	1.2500	12.000	210.00	
		24.935	53	1.0002			12.000		
		30.005	.30	7.0000			12.000		
		2233.	73.4	.9902					
		51.57	15.13						
		66 30 .	10435.						
		1422.	3 271 .						
24.	00	3430.3	35 1.02	G.	3422.6	70.30	1540.2	11515 .	
		639.3	72.17	54.19	640.0	12 736	1.8999		
		4375.5	353.	451.50	4375.3		1.0000		
		2998.8		711.11	3000.0	59.22	1159.9		
		3598.7	529.75	373.14	3600.0	55.16		1215.1	
		0.		1207.0	0.		11.996	0.	
		0.	1.5=	303.65	G.	ő.	16.000	0.	
		47.934	57	211.15			12.000	213.00	
		25.010	1.27	.9998			12.000	75000.	
		10.011	1.27	7.0000			12.000		
		274=	94.01	.9997	0.3300	4.0000	12.000		
		74.31	13.11	. 777 /					
		7955.							
		1703.							
		11 03.	949.						

PAGE 20 PILOT	בבותנצם	CN-ALLOC	AT ION MA	NAGEMENT	MODEL	BEICH
29.00 3+22.2	*58.3"	0.	3429.4	57.47	1579.1 1	1515.
544.0	54.1.	49.75	340.0	11.308		9351.
4375.0	454.1	452.01	+375 .D	80.38		50+4.
3000.4	390.51	339.63	3100.0	59.95		222.7
3599.1	519.84	372.61	3600.0	74.36		221.5
0.	.,,	1208.3	0.	0.	12.004	0.
0.	-3.33	305.68	c.	0.	15.000	0.
43.000	.07	210.93	1.25 00	1.2510		12.00
24.935	4-	1.0000				5100.
30.007	.97	7.0000	3. 4 3 4 0			03.00
3203.	1.09.77	5398.				
86.32	21.12					
9280.	14537.					
1984.	10578.					
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32.00 3417.5	350.27	0.	3419.5			1521.
	59.3.		5+5.5	12.791		31;3.
4374.2	361.2	453.15	+375.0	33.29		5040.
2998.5	385.2	311.87	3000.0	55.39		215.8
7600.5	519.23	371.00	3500.0	72.00		221.1
0.	1.	1209.2	J.	o.	11.395	C .
0.	2.31	304.19	٥.	0.	16.000	0.
43.009		211.19	1.24 58			10.00
25.011	1.75	.9908	2.9986			5036.
29.936	45	7.6000	<b>→.</b> J J J J 5	0000	12.000 1	03.00
3661.	125.4	1.0008				
98.54	24.17					
10504.	15779.					
2265.	11339.					
	350.37	с.	3429.3	73.55	1541.2 1	1510.
	57.15	45.45	535.4	13.445		2155.
4379.1	855.3	447.71	4375.0	92.50		5040.
3001.3	532.23	309.41	3000.0	58.02		193.2
3596.3	521.41	375.60	3500.0	72.10		131.0
0.	9.7	1199.6	(.	0.	12.009	C .
0.	-7.33	299.56	0.	0.	16.000	0.
	-4.97	211.14	1.2512	1.2500		13.00
24.959	-1.23	1.0002	3.0013			5000.
30.031	3.71	7.0000	3.3959			03.00
4119.	141.1	.9991			12.000 1	
110.37	27.17					
11923.	14375.					
2550 .	12457 .					

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P4GE 21	PILOT	5300021	ON-ALLOC	AP MOITA	403E4ENT	HODEL	321CF
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40.03	631.2	71.2	54.12	535.3	13.315		73.
	437 3.5	953.	653.04	4375.0	39.77		33.
	3001.0	399.47	306.91	3000.0	50.04		4.8
	360 1. 3	570.	371.55	3600.0	77.54		7.6
	3.	-12.2	1194.2	300.0	0.		0.
	0.	4.55	293.70	0.	0.	16.000	0.
	48.015	1.47	211.12	1.2436			.00
	24.931	-1.0	1.0000	3.0010			30.
	29.937		7.3000				.00
	4575.	155.6	1.0012	*****	5130	12.000 133	• • •
	123.30	77.17	1.001				
	13255.	22974.					
	29 34 .	1 3 232 .					
44.00	3434.9	359.01	G.	3437 .1	58.45	1540.7 115	14.
	536.3	66.27	45.37	528.9	12.730		75.
	4376.4	#53.7	450.28	437 E . 0	32.37		+1.
	3031.0	583.43	308 1	3300.0	54.35	1174.1 119	1.4
	350 2. 3	519.17	370.06	3610.0	55.07	-17 .8 117	1.9
	0.	2.1	1188.7	0.	9.	12.012	0.
	0.	-7, 77	295.35	(.	0.	16.000	0.
	-7.934	-1.1.2	210.96	1.2504		12.000 219	.00
	24.932	90	1.3004	3.0010		12.000 750	00.
	29.931	-2.25	7.0000	4. 10 25	0100	12.000 133	.00
	5033.	172.17	.9993				
	135.53	37.17					
	14581.	23771.					
	3115.	14015.					
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43.03	3439.5	140.17	· · ·		132.55	1539.7 115	
	532.3	74.72	66.13	5.7.4	24.374		33.
	4375.8	953.1	450.91	4375.0	174.77		42.
	2997.9	571.50	3113	3000.0	119.78		3.8
		-19.7	1202.3	3600.0	145.57		3.5
	3.	15.23	299.70	0.	3.	11.981	0.
	47.931	37	211.02	1.25 02	1.2500		
	25.018	2.11	.9997	2.9979	3.0000		.00
	30.015	2.13	7.0000	1. 1976	0000		.00
	5491.	137.54	1.0016		7300	12.000 103	• 0 0
	147.36	36.17	1.0016				
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	1333.	. 4.7,10.					

P465 32	PILOT	12.511.02.	. ON-4FF 00	ar ncita:	45354547	MODEL	NOISE
52.01	2700. 2	8.00	6.	21.0.7	31.15	1457.5	12330.
	1417.8	567.71	673.60	2035.3	= 7. 7 = 0		13158.
	4139.9	707.7	695.16	4375.3	1-3.78	1.1-38	15121.
	284 3. 0	5 76 . 7	472.69	3000.0	104.50	2415 .4	34.77.9
	3404.5	477.17	573.3F	3500.0	123.52	1753.7	3353.1
	).	-169.	2210	0.	3.		0.
	i.	\$47.3-	845.70	1.	1.	15.230	0.
	50.727	275.12	216.10	1.1929	1.2500		210.00
	25.331	137.37	9465	2.3430			75130 .
	31.772	195.47	8.0066	3.7.29			103.00
	59 35 .	221.27	.9732	. • . • . 5	2000	12.500	103.00
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	1955.7	101.4.	90.84	1974	75.352	1.7407	17537 .
	4972.8	953.1	761.35	4375.0	1= 3.11	1.1422 .	15033.
	2798.6	750.2	E 25 . 4 7	3010.0	105.07	1991.3	3421.8
	3355.1	\$87.51	613.67	3510.0	122.70	1136.6	3233.1
	0.	771.1	2112.5	0.	0.	11.336	0.
	0.	-91.3	8 - 3 . 5 8		0.	16.000	0.
	51.552	302.20	225.45	1.1536	1.2300	12.000	210.00
	26.335	211.41	.9318			12.000	75330 .
	32.094	274.32	7.9952	3.7390		12.000	103.00
	5353.	255.32	1.0501				
	171.54	44.30					
	15443.	2733=.					
	4945.	15919.					
50.33	1154.1	?1		2119.0	17.93	1771.6	12275 .
	1430.4	17.93	0.00	1300.3	:7.457	1.5539	13213.
	4744.2	1115	F44. TE	+3*5 .0	173.15	1.0315	1 - 334 .
	2371.4	192.7	379.52	3000.0	117.77	1355.9	2315.3
	358 2.5	665.5.	441.65	3500.0	147.54	27.5	2151.3
	0.	254.7	2133.6	0.	0.	12.101	C .
		-187.11	578.82	0.	0.	15.000	0.
	48.340	39.41	257.00	1.2-12	1.2330	12.000	217.00
	25.241	?9.€	.9930	2.37 14		12.300	75330.
	30.145	17.4	7.2207	3. 98 06	0110	12.000	103.00
	5791.	105.00	1.0516	2.36.00		12.000	103.00
	134 .47	51.97	1.0210				
	197 35 .	31773.					
	4662.	15 791 .					
	4505.	17 .21.					

PAGE 23 PILOT	350Jil.:	CN-ALLOC	ATION MA	41954547	-COEL	221CV
64.01 2246.9	514.17	c.	2190.4	3 1	1915.4 1	19.6.
399.7	52.51	19.72	371.0	73.174		3133.
+367.2	1015.	5+2.68	-377.0	172.39		135.
3003.9	371.74	363 3	3000.0	124.27		313.2
3591.3	613.92	446.81	3500.0	1.3.29		303.7
0.	-55.	2336.6	0.	0.	12.016	0.
0.	-29.53	453.29	c.	0.	16.000	ċ.
+3.785	7.3	257 . 5 4	1.2478	1.2500		12.30
24.959	-7.87	.9988	7.1038			5000.
30.073	8.77	7.0000	3.9903			23.00
7240.	331.25	1.0071				
139.41	5 4 -					
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	350.71	C .	2127 .7		1953.7 1	
1015.4	191.09	165.07	1076.4	11.957		3451.
4357.1	1047.4	548.00	+375.0			179.
2995.0	322.17	373.95	3000.0	119.37		057.1
3594.9	627.37	446.61	3500.0	143.56		131.5
0.	-455.1	2409.8	0.	0.	11.921	C .
q.	51.C7	516.76	0.	5 .	15.000	0.
-3.056	7.95	251.20	1.2478			10.00
25.042	5.07	.9984	2.9950			. 33 C ·
30.042	5.07	7.0463	3.9944	+ . 0330	12.000 1	03.00
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214.58	63.77					
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72.00 2394.4	245.30	0.	2155.3	31.75	1741.0 1	22.7
1215.5	214.7	169.88	1257. 9	-9.358		9252.
+375.3	1327.7	541.56	4375 .3	173.57		
2999.5	114.5	370.92	3000.0	115.19		421.0
3600.4	62 7.00	-44.77	3600.0	1+5.13		.73.2
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PAGE 24 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL
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PAGE 28 PILOT PROPURTION-ALLOCATION HONESTEIN MODEL NOTSE

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PAGE 29 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL NOISE

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PAGE 30 PILOT PROPORTION-ALLOCATION MANAGEMENT MODEL NOISE

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PAGE 31 PILOT PRODUCTION-ALLOCATION MANAGEMENT MODEL

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## Vita

Peter L. Fekke was born in San Diego, California, on December 27, 1943. He attended San Diego State College from which he graduated in 1965 with a Bachelor's degree in Mathematics and a commission in the United States Air Force.

After completing pilot training at Moody Air Force Base, Georgia, he operationally flew the KC-135 at Ellsworth Air Force Base, South Dakota, and in Southeast Asia. He next attended helicopter conversion school and eventually flew the HH-53 rescue helicopter out of Udorn Royal Thai Air Force Base, Thailand. He then flew the KC-135 at March Air Force Base, California. Later, he flew the FB-111 at Pease Air Force Base, New Hampshire.

He entered the Air Force Institute of Technology in June 1977.

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Florida. They have a son, David, and a daughter, Sarah.

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This research was conducted to investigate the	
production and allocation system. It applies sys	tem dynamics methodology as an
effective means to analyze this complex system.	The Pilot Production/Allocation
Management Model (PP/AMM) is developed using DYNA	MIC III simulation language.
The model is an aggregated representation of the	system which deals with recruit
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core forces, rated supplement resources, and Unde instructor pilots.	rgraduate Pilot Training (continued)

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Initially, the system is analyzed by a discussion of a cost module and of system equilibrium. Next, various force build-up, draw-down, and attrition scenarios are analyzed. A change of management policy involving the forecasting of attrition rates concludes the analysis and demonstrates an application of the model. This example also shows how rapidly and economically information can be obtained from the model.

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